DOCUMENT RESUME

TM 000 631

ED 052 229

TITLE	Abstracts for the 11th Annual Convocation of NERA.
INSTITUTION	Northeast Educational Research Association.
PUB DATE	Mar 71
NOTE	86p.
AVAILABLE FROM	Northeast Educational Research Association, New York State Education Department, Division of Evaluation, Albany, New York 12224 ($3.00)
EDRS PRICE	EDRS Price MF-$0.65 HC Not Available from EDRS.
DESCRIPTORS	*Abstracts, Administration, *Conference Reports, Counseling, Disadvantaged Youth, *Educational Research, Guidance, Higher Education, Measurement, Reading, Self Concept, Special Education, *Symposia, Testing, Tests

ABSTRACT

The Northeast Educational Research Association (NERA) hosted 10 sessions in November 1970. Papers presented at Session 1 dealt with special education (mentally retarded children, intelligence tests and figure orientation). Session 2 highlighted reading (initial teaching alphabet, Frostig subprograms on perception and the disadvantaged in regard to reading) and Session 3 focused on higher education. Session 4 was devoted to teacher perceptions (urban teachers, pre-service education and student-centered teaching); Session 5 solely to the study of the disadvantaged. Design and measurement topics included in Session 6 ranged from item analysis of criterion-referenced tests and stimulus standardization for individualized learning systems, to the scoring of creativity tests by computer simulation. Problems in measurement were dealt with in Session 9. Self-concept (review of research to relationship between creativity, social and academic acceptance) was treated in Session 7 and administration models, policies and influences in Session 8. The final session focused on facets of guidance and counseling papers. The NERA conference also included a number of symposia covering a wide range of topics. (CK)

5005279

$$U = \sum_{i=1}^{n} a_i X_i$$

$$\mu_U = E[U] = \sum_{i=1}^{n} a_i \mu_i$$

$$\sigma_U^2 = E[(U - \mu_U)^2]$$

$$= \sum_{i=1}^{n} a_i^2 \sigma_i^2 + 2 \sum_{i<j} a_i a_j \sigma_{ij}$$

$$\mu_U = \mu_1 \pm \mu_2$$

$$\sigma_U^2 = \sigma_1^2 + \sigma_2^2 \pm 2\sigma_{12}.$$

$$\sigma_U^2 = \sigma_1^2 + \sigma_2^2 \pm 2\rho_{12}\sigma_1\sigma_2.$$

ED052229

PERMISSION TO REPRODUCE THIS COPYRIGHTED MATERIAL BY MICROFICHE ONLY HAS BEEN GRANTED BY

NERA

TO ERIC AND ORGANIZATIONS OPERATING UNDER AGREEMENTS WITH THE U.S. OFFICE OF EDUCATION. FURTHER REPRODUCTION OUTSIDE THE ERIC SYSTEM REQUIRES PERMISSION OF THE COPYRIGHT OWNER.

Abstracts

for the

11th Annual Convocation

of

NERA

NORTHEAST EDUCATIONAL RESEARCH ASSOCIATION

T: 000 631

MARCH ~~1970~~
1971

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

NORTHEASTERN EDUCATIONAL RESEARCH ASSOCIATION

1970

OFFICERS

President ..... JOHN H. ROSENBACH, SUNY at Albany
Vice-President ..... WILLIAM ROCK, SUC at Brockport
Secretary-Treasurer ..... LEO D. DOHERTY, NYSED
Immediate Past President ..... RICHARD E. RIPPLE, Cornell

DIRECTORS

HOWARD KIGHT ..... SUNY at Buffalo
HAROLD MITZEL ..... Pennsylvania State
ROBERT OGLE ..... Finger Lakes Ed. Planning Center
DIETER PAULUS ..... University of Connecticut
ELLEN REGAN ..... O. I. S. E.
JULIAN ROBERTS ..... Yeshiva University

COMMITTEES

Program

ROBERT McMORRIS ..... SUNY at Albany (Co-Chairman)
FRED OHNMACHT ..... SUNY at Albany (Co-Chairman)
JOHN FINGER ..... Rhode Island College
KAY MURRAY ..... NYC Board of Education
DONALD MUSELLA ..... O. I. S. E.
DONALD NASCA ..... SUC at Brockport
MALCOLM SCAKTER ..... SUNY at Buffalo
HENRY HAUSDORFF ..... University of Pittsburgh

Publications

CHARLES REIMERS ..... SUC at Oneonta (The Researcher)
HOWARD BERKOWITZ ..... SUC at Oneonta (The Researcher)
DIETER PAULUS .... University of Connecticut (Paper Abstracts)

Pre-sessions

WILLIAM McLOUGHLIN ..... St. John's University

Arrangements

LEO DOHERTY ..... NYSED
JOYCE DURGERIAN ..... NERA
MICHAEL ITZKOWITZ ..... SUNY at Albany

10:45 to 12:15 P.M.

REPORTING SESSION 1
SPECIAL EDUCATION

CHAIRMAN:

Robert D. Cloward, Rhode Island College

PAPERS:

Investigation of the Effects of an Aquatics Program on the Psycho-Motor Functions of Trainable Mentally Retarded Children

WILLIAM FILEATREAU, BOCES Onondaga County,
JAMES F. MILLER, ECCO, and
ROBERT K. THROOP, Syracuse University

The Metropolitan Aquatics Project for the Handicapped is currently serving mentally and physically handicapped children in public and private educational institutions in Onondaga and Oswego counties, New York. The goal of the project is to provide aquatics training, modified to suit the participants' needs and capabilities. The purpose of the research is to determine the effect of aquatics training on certain psycho-motor functions of trainable mentally retarded children. The investigators are currently examining two areas of psycho-motor functions, fine-motor/visual-perceptual skills and body image.

The fine-motor/visual-perceptual function has been assessed with the Bender-Gestalt Test for Young Children (Koppitz scoring). Body image has been assessed with the Goodenough-Harris Drawing Test. Research design most closely resembles design Number 10, "Non-Equivalent Control Group Design" found in the *Handbook of Research on Teaching* by Gage. The treatment group consists of forty-one students between 6 and 18 years of age (as of September 1, 1969) enrolled with the Onondaga County Board of Cooperative Educational Services, in its Center for trainable mentally retarded children. The non-treatment group consists of forty trainable mentally retarded students 6 to 18 years of age enrolled in programs in three cooperating school districts.

A design assumption is that the use of intact groups will not bias the investigation since the samples selected are drawn from a legally defined and selected population. Therefore, the samples will exhibit greater homogenity of characteristics than the general population.

The data is being organized so that an analysis of co-varience may be run. At this time, however, the investigators are making gross

comparisons based on mean gains. It is the investigators' feeling that drawing conclusions at this time would be premature. The value of the study to this point has been to raise some serious questions about procedures, especially in testing, used with exceptional children.

-:- -:- -:- -:-

A Prototype Piagetian Written Test

WILLIAM M. GRAY, University of Dayton

This study was designed to produce a prototype of a written assessment instrument based on the work of Piaget. Evidence has been increasing with regard to the usefulness of the Piagetian approach to intellectual development. However, like all 'clinically' oriented means of assessment, the price in time that must be paid in comparison to the amount of information obtained (number of individuals assessed) is extremely high. Thus, a group-administered instrument would be useful as a CRUDE means of obtaining the desired information. This study was a step in the development of such an instrument.

A sample of 96 subjects, randomly selected and stratified by age (9-16 years) in a design counterbalanced for order of method of presentation, was given a series of three Piagetian tasks (pendulum, balance, combinations of liquids) in one-to-one situations and a written instrument, in group situations, containing questions that were designed to be 'logically equivalent' to the Piagetian tasks. Effect of order of method of presentation (written or Piagetian tasks) was evaluated with a t-test. A multitrait-multimethod matrix was used to assess the adequacy of the written questions. Predicted difficulty sequence (s) of subsets of the written items was compared with empirical difficulty sequence (s) of the items via Kendall's *Tau* for tied ranks.

Results indicated that the order of method of presentation (written or Piagetian tasks) was not significant ($p > .05$). Multitrait-multimethod analysis indicated little convergent or discriminant validity, although all entries in the matrix were significant ($p < .01$). Predicted difficulty sequences for the different item subjects were acceptable: *Tau* = .638, .707, and .861. A *qualitative* analysis indicated that some of the written questions may not have actually been logically equivalent to the Piagetian tasks. Suggestions are made as to the possible usefulness of the device developed.

-:- -:- -:- -:-

Can Scores Obtained From the Slosson Intelligence Test be Used With as Much Confidence as Scores Obtained from the Stanford-Binet Intelligence Scale for Special Class Placement?

JOHN A. JENSEN, Boston College
ROBERT J. ARMSTRONG, Salem State College, and
JOHN A. SCHMITT, Boston College

Problem:

Quite frequently there is a need to evaluate students to determine whether they would benefit from SPECIAL CLASS PLACEMENT. Currently, this demands time consuming administration of an individual intelligence test such as the Stanford-Binet Intelligence Scale (S-B), Form L-M to determine eligibility for original special class placement, followed by periodic testing to verify the appropriateness of the special program for each child. Unfortunately, individual intelligence tests such as the preceding: (1) are time consuming in that they require an average administration time of one hour; and (2) require specialized training to administer and score, usually a full semester course.

The Slosson Intelligence Test (SIT) is an individual screening instrument for both children and adults. The purpose of its author, Richard L. Slosson, was to develop an abbreviated form of the S-B. The administration and scoring of the SIT is very easy, and specialized training is not required. Also, it is not time consuming, being given as a rule in 15 to 20 minutes and sometimes less if the scatter of success is limited. It was the purpose of this study to determine the validity of the SIT in making judgments concerning placement of students in SPECIAL EDUCATION classes, using the S-B as the validity criterion. In other words, "Can scores obtained from the SIT be used with as much confidence as scores obtained from the S-B for SPECIAL CLASS PLACEMENT?"

Method:

The testing sample for the study consisted of 57 students (ages 9-12) enrolled in SPECIAL EDUCATION classes in several public school systems in northeastern Massachusetts. Each student was administered both a S-B and a SIT within a two-week period of time. A z ratio (for correlated data) was then used to test the null hypothesis of no difference between the S-B and SIT means. Also, using the Pearson Product Moment formula, a correlation coefficient was computed between the S-B and SIT scores. Then, a z ratio was used to test the null hypothesis that the obtained correlation between the S-B and SIT scores did not differ from $r = o$.

Results:

The null hypothesis of no difference between the S-B and SIT scores was not able to be rejected at the .05 probability level. The

estimated whole range validity coefficient of .91 between the S-B and the SIT scores was significant beyond the .001 probability level. Additionally, the average IQ score difference between the two tests was found to be 4.51 IQ score points, which is approximately the same as the standard error of measurement of the S-B itself (5 IQ points).

Conclusions:

It appears from the results of this study, that for these students, scores obtained from the SIT can be used with as much confidence as scores obtained from the S-B for SPECIAL CLASS PLACEMENT. The results reinforce Slosson's purposes for constructing the test, namely:

1. that it can be used as a valid screening and retesting instrument.
2. that no specialized training is needed to administer and score it.

The findings should be of particular interest to specialized personnel since it not only provides them with a valid abbreviated test, but since no training is needed, it provides them with an invaluable source of potential administrators.

-:- -:- -:- -:-

A Statistical Analysis of the Item Validity of the Peabody Picture Vocabulary Test

WILLIAM M. MCCOOK, DIETER H. PAULUS and JOSEPH S. RENZULLI,
University of Connecticut

This study is part of an ongoing body of research that deals with the hierarchical nature of item difficulty in the measurement of verbal intelligence through the use of the Peabody Picture Vocabulary Test. In a previous study on the PPVT (Renzulli and Paulus, 1969)*, it was found that an empirically derived item ordering resulted in a more sequentially valid progression of item difficulties than that which was proposed in the original published version of the test. The item ordering is especially consequential in this test since the instrument assumes that the subject would not answer additional items correctly following inappropriate responses to previous items.

While the previous study developed a new item ordering of the PPVT it did not study the effect of administering the items in the new

* Renzulli, Joseph S. and Paulus, Dieter H., "A Cross-Validation of the Item Ordering of the Peabody Picture Vocabulary Test." Journal of Educational Measurement, VI, (Spring, 1969), 15-19.

order to an independent population and the relative effect on the item difficulties. The previous study did not measure the effect of administering the test in the new order on the scores that subjects receive and the correlation between scores on the newly ordered PPVT and other intelligence measures. Neither did the previous study determine the effect on the alternate form reliability of the test by administering it in the new order. This study will investigate those topics.

Approximately 300 above average students from the 4th, 5th, and 6th grade in schools in eastern Connecticut were randomly assigned to one of two groups. One group was given both forms of the originally published order of items. The other group was given both forms of the newly ordered PPVT. California Test of Mental Maturity scores were also obtained on all of the students. All forms were administered in the spring of 1970.

Item difficulty indices were then calculated on items 70 to 120 (the items considered by the previous study). Rank order correlation coefficients will be calculated by assigning ranks to item numbers to correlate with corresponding item difficulties and difference tests will be applied to determine statistical significance.

Further analyses will involve the use of correlational techniques to determine the alternate form reliability of the new forms, and the relationship between subject scores on the CTMM and the newly ordered PPVT. Also, difference tests will be applied to determine if subjects in the same intelligence range who take the newly ordered PPVT score differently from those who take the original test.

At this point the tests have been administered and the processing of the data has begun. The analysis of data is incomplete at the present time. However, the analysis would be finished by the time of the conference. Furthermore, a preliminary investigation of the data indicates that the Renzulli-Paulus ordering is not considerably better than the original order.

-:- -:- -:- -:-

The Effects of Color Cues as Aids in the Discrimination of Figure Orientation

LAWRENCE MCNALLY, SUNY at Cortland

It is a well demonstrated fact that young children have considerable difficulty in discriminating between figures that are similar except for their orientation. In many of the studies which have investigated this problem, the discriminanda which have presented the greatest difficulty are oblique lines oriented in the opposite direction and a U figure rotated 90° to the left VS. one rotated 90° to the right.

The nature of the problem under investigation was to see if the addition of color cues would facilitate children's ability to make the discrimination by increasing the distinctiveness of the salient features of the figures. Specifically, the purpose of the study was to examine the effects of colors as aids in the ability of children to differentiate the directional difference between two orientations of an oblique line as well as a rotated U figure. The utilization of colors as cues is predicated on previous research findings that young and/or poor problem-solvers prefer color over form.

The subjects were 32 kindergarten children with a mean IQ of 111 and a C.A. of 71 months with a range of 66 to 78 months. The stimulus materials consisted of the two different orientations of the oblique line and the rotated U figure imprinted separately on 5" square white plastic cards. Children were randomly assigned to either the Similar Color Condition where each member of the pair was of the same color (s) or the Contrasted Color Condition where each member of the pair was of a different color (s). Within each of these conditions there were two subgroups with a different type of exposure:

Type I where only one color was used in constructing the figures and Type II where two colors were used. Thus the subjects were assigned to one of four groups. The order of presentation was designed so that each pair would appear first an equal number of times and the stimuli and colors which were correct were counter-balanced within groups. The lateral position of the correct card in each pair was varied according to a Gellerman series.

The dependent variable was trials to criterion. On the basis of a Kruskal-Wallis one-way analysis of variance a significant difference was found at the $p<.001$ between the groups in the various conditions. The results of the Mann-Whitney U Test indicated a significant difference in favor of the Contrasted Color Condition under both Type I and Type II exposures.

These findings are discussed in terms of previous research which indicated that the perceptual system of the young child is more sensitive to variability than to similarity. These results are also related to the differentiation theory of discrimination learning with its perceptual orientation.

2:00 to 3:30 P.M.

REPORTING SESSION 2
READING

CHAIRMAN:

Donald R. Lashinger, Syracuse University

PAPERS:

Word Boundaries In Speech And Print — Do Kindergarten Children Realize The Nature Of The Relationship? (*Abstract*)

MARJORIE H. HOLDEN and WALTER H. MACGINITE,
Teachers College, Columbia University

A growing body of literature indicates that children under six do not segment utterances into words, nor consistently identify words as spatially isolated units in the visual mode.

Studies of first grade children's understanding of the printing convention by Levin (1966) and Meltzer and Herse (1969) indicate that beginning readers often do not understand the conventions of written English. Kindergarteners do not always segment oral utterances into words either, (Holden and MacGinitie, 1969). The present study attempted to determine if children at the end of kindergarten recognize the correspondence between oral segments of speech and their printed representation, even when they do not segment oral utterances into words.

During May sixty-two kindergarteners were asked to segment oral utterances, and then indicate the correct written representation of the utterance. A multiple choice format with four alternatives was used. Answers were conventionally written and punctuated, but the number of groups (of letters) or "words" was varied. Nonsense syllables were used for some subjects. Others were shown four differently spaced versions of the actual sentence.

A preliminary inspection of the data supports the following conclusions: (1) Although children's conceptions of word boundaries do not correspond consistently to lexical units, children are more likely to select the proper written version of a sentence they have correctly segmented in the auditory mode: (2) The total number of successes is greatly increased if credit is given for selecting the printed sentence that corresponds to the child's oral segmentation pattern; (3) The task of finding the written version of an utterance that corresponds to the oral version is difficult for many children, and a short training session resulted in understanding for only a few.

Informal observation suggests that kindergarteners frequently do not understand these aspects of the printing convention: (1) Words are

groups of letters; (2) Printed words are separated by spaces; (3) Writing procedes left to right, not right to left, NOR up and down.

Frequent confusion of words with letters raises the question whether sound-symbol instruction based on individual letters should be initiated before the printing convention is understood.

REFERENCES

Holden, M. H. and MacGinitie, W. H. Children's conceptions of word boundaries as a function of different linguistic contexts. Paper presented at the meeting of the American Educational Research Association, Los Angeles, February, 1969.

Levin, H. Understanding the reading process. Educational development laboratories annual, 1966, Pp. 127-133.

Meltzer, N. S. and Herse, R. The boundaries of written words as seen by first graders. *Journal of reading behavior,* 1969, *1,* 3-14.

-:- -:- -:- -:-

A Suburban School District's Four Years Experience with the Initial Teaching Alphabet

BYRON J. WARD, Syracuse State School

A. Purpose:

This study was undertaken to determine the contribution of the Initial Teaching Alphabet (i.t.a.) to the reading program of the West Genesee Central School District. The progress of the students in this study was followed for a four year period with a new first grade class added for each of these four years. Thus, the results reported include posttest achievement scores of 4 first grade classes, 3 second grade classes, 2 third grade classes and 1 fourth grade class.

B. Methodology:

The program was initiated with one first grade class, in each of the seven elementary schools in the West Genesee District, utilizing the Initial Teaching Alphabet for providing beginning reading instruction. During the four years of this study the i.t.a. program was expanded to include 11 of the 32 first grades in the district.

The experimental group was the group of children who received their beginning reading instruction in the Initial Teaching Alphabet. The control group consisted of the remainder of the children who received their beginning reading instruction in the traditional orthography (t.o.).

Progress was assessed at the end of each academic year by using standardized group achievement tests. The *Stanford Achievement Test* was used at the end of the first and second grades. The *Iowa Tests of Basic Skills* were used as the posttest measure at the end of the third and fourth grades. Intelligence was measured by using the *California Test of Mental Maturity* administered in first and third grades. For the second and fourth grade students the scores used were those they earned the previous year on the *California Test of Mental Maturity.*

T-tests were used to compare the achievement of the experimental and control classes at the end of each year. Each group was compared not only on the various sub-tests within the achievement batteries but also on the basis of intelligence. All of the analysis in this study were done at the Syracuse University Computer Center using an IBM/360 Computer.

C. Results/Conclusions:

The analysis of the data in this study indicated that the experimental and control groups were not significantly different in terms of intelligence. In terms of achievement the i.t.a. instructed students earned significantly higher scores on 4 of the 6 *Stanford Achievement Tests* for four consecutive years at the end of first grade. This initial advantage disappeared in subsequent grades. There was, however, evidence that more of the advantage obtained from i.t.a. instruction was being maintained by second graders the second and third years of the study.

The initial advantage obtained by i.t.a. instruction was significant at the end of first grade and it appears that it can be maintained in subsequent grades when proper provisions are made in the curriculum to accommodate the improved reading skill of the children who received their beginning instruction in the i.t.a.

-:- -:- -:- -:-

An Experimental Study of the Effect of Frostig Subprograms on the Development of Visual Perception and Reading

THOMAS L. HICK and MONTESS BYRD, SUNY at New Paltz

Problem:

Can the Frostig program improve specific areas of visual perception and, if so, does such specific improvement lead to better progress in reading?

Method:

After being given the Development Test of Visual Perception (DTVP) 131 children in a campus school (grades K, 1, and 2) were

stratified for grade level and perceptual development and randomly assigned to perceptual training in one of the 5 Frostig subprograms: I. Eye-Motor Coordination, II. Figure Ground, III. Form Constancy, IV. Position in Space, and V. Spacial Relations. Five teachers rotated subprograms according to a Latin square layout to partially control for teacher differences. Training sessions were held for 27 days for 30 minutes per day. After perceptual training, the DTVP was again administered by classroom teachers. Nearly one year later, the Gates-MacGinitie Reading Tests were administered to the children who participated in perceptual training.

Analysis:

Five analyses were produced following the Multiple Linear Regression approach described by Bottenberg and Ward (1963) for hypothesis testing. Each of the 5 DTVP posttests served as the criterion variable while the effect of the corresponding perceptual training was tested with control for grade level and the corresponding DTVP subtest given as a pretest.

Thus, the main hypothesis was that perceptual treatment means are equal at equal levels of initial skill and grade level.

With Gates-MacGinitie vocabulary and comprehension as criteria the hypothesis was tested that perceptual treatment means for vocabulary or comprehension are equal with control for grade level.

Results:

Tests of the above hypotheses revealed that specific training in perceptual areas I, III, and IV does produce specific improvement in those areas. Specific training in area IV was, however, not effective. Effectiveness of training in area V depended on grade with the greatest effect at the kindergarten level. Vocabulary and comprehension development did not differ among the perceptual training groups with control for grade level.

-:- -:- -:- -:-

Intercorrelations Between Indices of Language Facility and Reading Achievement in Disadvantaged Elementary School Children

DAVID J. FOX and VALERIE B. BARNES,
City College, City University of New York

Nature of the Problem:

To examine what, if any, relationship exists between two measures of oral language facility on the one hand, (speaking and understanding) and achievement on a standardized reading test on the other.

Methodology: *a. Instruments and Procedure*

Listening comprehension was measured by a group administered Understanding Spoken English test (USE), consisting of two detailed pictures, a classroom and a street. Children responded to tape recorded oral instructions by writing a number on a particular item referred to in each instruction. Split-half reliability coefficients were .84 and .82.

Oral verbal fluency was evaluated with an individually administered, untimed Speaking Test (SPE) in which the child was shown a detailed picture of a city playground and asked to tell what he "saw in the picture, and what the people in the picture were doing."

Reading estimates were available from the city-wide administration of the Metropolitan Achievement Test.

b. Sample of Schools and Children

Three types of New York City public elementary schools, all located in ESEA designated poverty areas participated: 16 schools in the More Effective Schools Program, (MES), seven official Control (C) schools in the evaluation of the MES program, and seven Special Service (SS) schools randomly selected by the MES evaluation staff. Data were available for 238 third graders: 136 MES, 36 C, and 66 SS children, all reading close to or at grade level.

c. Analytic Methods

For each of the three samples, a 10 x 10 correlational matric was generated incorporating 3 SPE sub-scores (a. number items identified, b. number qualified, and c. ratio a/b); 5 USE sub-scores, (d. simple vocabulary, e. complex vocabulary, f. simple concepts, g. complex concepts, and h. total score) and 2 MAT sub-scores (i. word knowledge, j. comprehension).

Results:

No statistically significant correlations existed between any SPE sub-score and either the USE test or reading achievement. Thus oral verbal fluency (as measured by the SPE test) was not related to ability to understand spoken English reading comprehension or word knowledge.

In contrast, ability to understand spoken English (USE) was significantly correlated with both aspects of reading achievement for all groups of children. For the USE sub-scores, the proportion of shared variance ranged from 12% to 42% with word knowledge and between 14% and 49% with comprehension.

Conclusion:

Since the end product of both the SPE test and the MAT word knowledge test is the production of a word which most correctly correspond

to the original stimulus, one explanation for the absence of any significant correlations was attributed to the difference in the *process* through which both the information is elicited and the manner in which it is presented. Thus, when measuring skills grossly categorized as "language facility," efforts should be made to clearly distinguish the several facets of this ability, in that the processes by which responses are made hav shown to be different aspects of language facility and therefore not ne essarily related to reading achievement.

-:- -:- -:- -:-

Do Open Enrollment Pupils from Poverty Areas Attending Receiving Schools Maintain their Superiority in Reading Achievement Over those Comparable Pupils from Poverty Areas who Attend their Own Neighborhood Schools?

GEORGE FORLANO and JACOB ABRAMSON,
Board of Education, New York City

A. Problem/Purpose:

What is the reading achievement of fifth grade minority group children from poverty areas receiving schools with fifth grade minority group children from poverty areas who remain in their own neighborhood school.

Are the ascertained reading achievement differences between fifth grade minority group children from poverty areas attending receiving schools (predominantly white) and fifth grade minority group children from poverty areas who attend their own neighborhood school, statistically significant.

What is the reading achievement among fifth grade minority group children from poverty areas attending receiving schools, who enter the receiving school at the second, third, fourth and fifth grade respectively.

Are the ascertained reading achievement differences among fifth grade minority group children from poverty areas who enter receiving schools at the second, third, fourth and fifth grade respectively, statistically significant.

B. Methodology:

This is a longitudinal study in that all pupils had to have an initial score and final score in order to be included in the study population.

Instruments/Procedures:

Different forms and levels of the Metropolitan Reading Achievement Test were administered in March 1969 (initial test time) and

March 1970 (final test time) as part of the New York City Board of Education Annual Citywide Reading Survey. At initial test time, these pupils were in the fourth grade.

From randomly selected receiving schools, names of all fifth grade minority group pupils were obtained, with their school of origin and the grade at which they entered the receiving school.

Analytical Methods:

In the first method, the mean grade scores of all fifth grade minority pupil groups will be compared with one another at initial and final test time.

The second method of analysis is the application of the "t" test technique for statistical significance of final mean grade scores of all pupil groups. The "Analysis of Co-variance" technique is used to correct for inequality on initial mean grade scores among the fifth grade pupil groups.

C. *Results/Conclusions*:

Those fifth grade minority group pupils who attend receiving schools achieve higher mean grade scores in reading at final test time than those minority group pupils who attend their own neighborhood school in their neighborhood poverty area.

This superiority in reading achievement of those fifth grade pupils attending receiving schools over those fifth grade poverty area pupils who attend schools in their own neighborhood, is not statistically significant when equating for inequality at initial test time at the fourth grade.

Among those fifth grade minority group pupils attending receiving schools, those pupils who entered the receiving school at the second grade and below, achieve a higher mean grade score in reading at final test time than those fifth grade pupils in the receiving schools who entered the school at the third, fourth and fifth grade respectively.

This superiority in favor of the fifth grade group who entered the receiving school at the second grade and earlier is not statistically significant when equating for inequality at initial test time.

These conclusions are limited to urban inner-city fifth grade level pupils. It may be noted that the comparisons were solely based upon standardized test results.

-:- -:- -:- -:-

The Effects of Varying Amounts of Preschool Experience on Reading Readiness and Achievement of Culturally Deprived Children

LAURA D. HARCKHAM, Manhattan College and
JOAN MONTALBANO, New York City Public Schools

Prekindergarten programs were introduced into American education with the intention of compensating for deprived environments of which children were a part before entering school. Success of these programs has frequently been measured by comparing scores of experimental and control groups (children enrolled in and not in prekindergarten programs) at the end of the treatment period. Few researchers have followed up the performance of these children in the primary grades, although greater academic achievement has been at least one important goal of the programs.

This study followed 130 Negro and Puerto Rican disadvantaged children in Brooklyn, divided into four groups: those with no school experience before first grade, those with Head Start only before first grade, those with kindergarten only before first grade, and those with Head Start and kindergarten experience, through second grade to determine whether performance on the New York Reading Readiness Test at the beginning of first grade and reading achievement on the Metropolitan Achievement Test at the end of second grade were affected by school experience before first grade.

It was hypothesized that on the reading readiness tests children with Head Start experience would score significantly higher than those with no preschool experience, those with kindergarten only would score significantly higher than those with Head Start only and those with no experience, and that those with Head Start and kindergarten would score significantly higher than all other groups. The same hypotheses were tested in relation to reading achievement on the Metropolitan in second grade.

Analysis of variance was used to test these hypotheses. Significant *F*-ratios were found, but post-mortem tests revealed that significance was not necessarily related to the amount of schooling in hierarchical order.

On the readiness tests, there was no significant difference between Head Start only and no experience, or between kindergarten only and Head Start, or kindergarten only and no experience. Only the difference between children who had two years of preschool (Head Start and kindergarten) and the three other groups was statistically significant.

When children were tested in reading in second grade, a different pattern emerged. Children with two years of preschool scored significantly higher than all others, and those with kindergarten experience only

scored significantly higher than those with Head Start only. The children who had Head Start, however, did not score significantly higher than those without any preschool experience.

These data, for a relatively small sample of disadvantaged children, suggest that although preschool experience of less than two years did not affect readiness scores significantly, the effects of kindergarten and kindergarten combined with Head Start may be found on reading achievement. Head Start as the only preschool experience appears to be no better than no preschool experience at all on both measures.

MONDAY, NOVEMBER 16 NEW LOBBY — 3

2.00 to 3:30 P.M.

REPORTING SESSION 3
PROBLEMS IN HIGHER EDUCATION

CHAIRMAN:

Mary D. Griffen, Boston College

PAPERS:

An Analysis of Employment Patterns of Vocational Education Graduates in New York State

RICHARD J. McCOWAN and M. DUANE MONGERSON, SUC at Buffalo

Nature of the Problem:

The purpose of the study was to analyze the educational and occupational patterns of June, 1969, high school graduates, from vocational educational programs in Standard Metropolitan Statistical Areas (SMSA) and in Outside Standard Metropolitan Statistical Areas (OSMSA). The study also included an analysis of student attitudes toward work and toward academic and vocational courses in high school. The study was also designed to develop a sampling model which possibly could be used by the New York State Education Department for subsequent followups of vocational education graduates.

Methodology:

The sample for the study was two stage in nature. Initially a stratified random sample of secondary schools in New York State classified by size was selected for the study. Schools were also stratified into SMSA and OSMSA categories. From lists of June, 1969, graduates, a stratified random sample of 2950 S's was randomly selected with occupational curriculum as a blocking variable. A questionnaire was developed, field tested, and sent to each of the selected S's.

Specifically the study was designed to 1) identify the occupations in which the graduates were employed; 2) compare that occupation to the area of high school training; 3) identify the number of occupational changes per graduate; 4) analyze attitudes towards their current occupations and their high school program; 5) identify how they obtained their employment and who influenced them in choosing that program; 6) analyze the reasons why they did or did not pursue a career related to their occupational program.

A one-way ANOVA was used to analyze attitudinal data gathered by a semantic differential. All other data were organized in tables containing descriptive information. After the initial mailing, six followups were

conducted. In addition to questionnaire data, 100 interviews were conducted using both a structured and open-ended interview format.

Results:

A preliminary analysis of the data indicates that less than 50 percent of the graduates entered occupations for which they were trained. In general, it could be concluded that their attitudes toward vocational training were favorable, as were their attitudes toward the concept of work. The major reasons why students did not enter a career related to their training involved a lack of jobs, marriage and military service.

-:- -:- -:- -:-

The Development of Intellectual Commitment

BARBARA HUMMEL ROSSI, SUNY at Buffalo

The problem basic to the identity crisis of many young people is that they are able to find few values and ideals in life that are stable and worthy of personal commitment. The lack of structure in our society explains this problem in part; however, because some of today's youth are able to find values and goals to which they can become committed, society can not be totally held responsible for the lack of commitment in the others. This research study was directed to the problem of understanding the process by which university students develop commitment. Intellectual commitment represents one form of commitment that is significant to society and that is manifested in fairly visible activities; it was, therefore, the form of commitment examined in this study.

To form the basis for the study, intellectual commitment was defined as an intense and persevering involvement with intellectual activities and a model was proposed to explain the process by which intellectual commitment develops. It was hypothesized that the degree of intellectual commitment a university student develops is dependent upon his intellectual ability, degree of intellectual involvement in high school, expectations of intellectual involvement as a university student, personality characteristics, and influence of his university associates. Instruments were developed by the author to measure high school intellectual involvement, expectations of intellectual involvement, influence of associates, and intellectual commitment; published instruments were used for the other measures. Both the influence of associates and intellectual commitment instruments have two subtests, each measuring a different dimension of the respective variable.

A sample of 135 freshman male and female, resident university students was selected for study. To examine the process by which intellectual commitment develops, intellectual ability, high school intellectual involvement, expectations of intellectual involvement, and personality

characteristics were measured just prior to the students' first university semester. At the end of their first semester, the influence of their associates and the degree of intellectual commitment they had developed as university students was measured.

Step-wise multivariate regression analysis was used to assess the contribution of each independent variable to the two measures of the dependent variable, intellectual commitment. The analysis indicated that verbal ability, intellectual involvement in high school, expectations of intellectual involvement, and influence of associates were significantly related to intellectual commitment.

The study was successful in identifying, measuring, and modeling a new dimension of human performance. The implications to society (particularly educators), in terms of gaining an understanding of a significant form of human behavior, are numerous.

-:- -:- -:- -:-

The Impact of College Major

CLARENCE H. BAGLEY, SUC at Cortland

SUCC has participated in a general assessment of the characteristics of its student undergraduate population as a part of a Four College Study on Institutional Development. The purpose of this study is to report one part of the Four College Study dealing with the impact of college majors as reflected in the scale and item scores of the College Student Questionnaire (CSQ).

The CSQ has been developed by the Educational Testing Service to assess student attitude and biographical information in institutional research studies. The CSQ-1 and CSQ-2 instruments have been given to entering students and sub-samples of returning students at SUCC over a five-year time period. Using selected scale and item scores, students from four different majors were studied on a longitudinal basis.

The four majors identified were Liberal Arts, Undecided, Secondary Education and Elementary Education. Students who signified a major in these areas upon entering college and who retained their known preference for at least the first two years were designated as those majors. Students participating in the study were a random sample of entering freshmen in 1967-1969. For each of the four student majors, the seven scale scores and five item scores on the CSQ-1 were tested in the form of hypotheses. The hypotheses used were motivation for grades, cultural sophistication, etc.

The results show that using certain predisposed concepts about differences among students of different majors, the present instrument

and population do not generally manifest such differences for the scale and item scores so used in the study. Similarity is more often the case than dissimilarity. The concepts so held by college staff and faculty concerning certain characteristics of specified majors as to grades and sophistication are not as definite and precise as presented.

-:- -:- -:- -:-

Environment Press in a Community College and a Technical Institute

MARY BACH KIEVIT, Rutgers University

Purpose:

Three trends were instrumental in the formulation of the problem investigated:

1. the expansion in the number and types of educational institutions.
2. increasing emphasis upon accountability for achieving goals of most types of educational programs, including those at the post-secondary level to prepare youth for employment.
3. increasing importance given to the institutional environment as facilitating or impeding the achievement of educational objectives.

This study was planned to answer the question: Do measurable differences exist in the environmental press in a community college compared to press in a technical institute as experienced and described by fourth term students in the same four occupational curricula?

Methodology:

Procedures: One community college and one technical institute were selected within approximately 25 miles of each other, which were comparable on type of funding, and offering the same four occupational program, among others.

Instruments: College Characteristics Index developed by George Stern to measure environmental press. (Stern, *People in Context*, Wiley, 1970)

Population: All fourth term students of business administration, electrical technology, nursing, and secretarial science in the community college and technical institute surveyed on campus. Proportions responding were; 60 per cent (91) from the community college; and 68 per cent (.193) from the technical institute.

Analytic Methods: Analysis of factor mean score differences; profiles of factor mean scores, product moment correlations. Data were analyzed for students of each curriculum and each institution.

Results: The environmental press at the community college was described as being more supportive of intellectual pursuits than was the press of the technical institute. Extent of variation between the two schools in the nonintellectual dimension of climate was minimal. Greater commonality in press was described by community college students irrespective of curriculum than by students in the technical institute, thus suggesting the existence of more clearly delineated student subcultures at the technical institute. These findings viewed in the context of related findings from the larger project suggest that differences in press may influence the drop-out rate and which students will be among the drop-outs from each school.

-:- -:- -:- -:-

Factors in Drug Use Among Community College Students

PATRICIA PAULSON, Queensborough Community College

Purpose:

To (1) determine differences in background, practices, and attitudes between drug users and nonusers as a basis for more effective health education, and

(2) to develop an instrument that would (a) distinguish drug users from nonusers, and (b) elicit the practices and attitudes toward the use or nonuse of drugs.

Methods and Procedures:

An instrument developed by the investigator contained statements grouped into various categories which surveyed demographic data, attitudes towards drugs and drug use, reasons for using drugs, facts about users, self image, success-failure motivation, and self esteem.

The subjects were a random sample of classes at Queensborough Community College in 1969. The two major statistical tests used were the Chi-square and "t" tests.

Findings:

Among the major findings of this study were the following:

1. Thirty-eight per cent of the respondents indicated that they were using or had used drugs.

2. Seventy per cent who had used drugs in the past were presently using drugs.

3. According to drug classifications, the most frequently used, in order of their use, were hallucinogens, amphetamines, barbiturates, opiates, and tranquilizers.

4. Sixty-one per cent began smoking marijuana in high school.

5. Fifty per cent began using drugs other than marijuana in high school.

6. Seventy-seven per cent indicated their initial source of drug supply was "a friend."

7. Significant differences between users and nonusers were found on self-esteem, college major, sex, health education course in high school and home atmosphere.

Conclusions:

On the basis of the findings and within the limitations of this investigation, the following conclusions were drawn:

1. Hallucinogens and, more specifically, marijuana (American style) are the predominant drugs used by community college students.

2. Drug users are not interested in stopping their practice, nor are they concerned about the potential harmful effects to their health.

3. A health education course in high school has little effect on use of drugs, especially with boys.

-:- -:- -:- -:-

Study of a Pilot Educational Program Between Nassau Community College and Topic House (Nassau County Drug Addiction Rehabilitation Center)

MELVIN MORGENSTEIN, Nassau Community College

Based upon a study conducted by Dr. Melvin Morgenstein and Prof. Harriet Strongin entitled "A Study of an Articulation Program Between Nassau Community College and Topic House (Nassau County Drug Therapeutic Rehabilitation Center)", the investigators proposed an educational program to implement their recommendations.

A. Purpose

The program was designed to meet the broadest educational needs of the residents. It considered vocational, professional and cultural aspirations as well as capabilities and achievement. It also contained plans

for specific employment preparation. The following purposes were to be served: career planning; exploration of academic and business areas; addition of a new dimension to the therapeutic program; reduction of attrition in the therapeutic program; and upon reentry, to provide society with people who have productive skills or who would continue to study.

B. Methodology

a) Procedures

1. The study involved comparisons of those residents involved in the educational program with those residents not so involved. The comparison included such items as attrition from the therapeutic program, the length of entry into the community after completion of the therapeutic program, and attitudes toward education and therapy.

A similar comparison was done, matching those involved in the Topic House educational program with a therapeutic population in one of the centers in New York City in which none of the residents was involved in a similar program.

2. Structured interviews with residents were held. Data collection included diagnostic test results, past education, work experience, intelligence quotients, etc.

3. Discussion of residents' goals and educational placement took place among Topic House personnel, the Division of Vocational Rehabilitation counselor, and the investigators.

4. Constant contact was maintained with residents, their teachers, the DVR counselor, and Topic House personnel.

b) Sample

The sample consisted of 115 Topic House residents who were involved in the educational program, and 100 residents who were not so involved

c) Analytic Methods

1. Quantitive and qualitative achievement in educational experiences.
2. Development of case studies.
3. Comparison of control and normal groups.
4. Descriptive analysis of special program features.
5. Evaluation of program through interviews and comparisons.

C. Results

Since this is a longitudinal study that will continue for several years, some of the conclusions must be considered tentative. The study can, however, be used as a working model by other schools and drug treatment centers.

1. The attrition rate from the therapeutic center for the program was significantly lower than for those who were not so involved.

2. The attitude toward education of those who were involved in the educational program improved considerably with time.

3. The educational program had a considerable impact on the therapeutic concept. It added depth to the social situation in the house: New topics of conversation were introduced: Nassau Community College faculty members frequented the House.

4. Those in the education program showed considerable goal change. This was indicative of the unsettled nature of their earlier objectives and goals.

5. Educational involvement is an emotional growth activity for ex-addicts who are in therapy. As they develop new insights into life, they also devise new methods for coping with reality.

6. The residents who were involved in the educational program did not fit into what might be called the normal pattern for DVR clients. Their movement along achievement lines was not delienated so clearly as it is with other DVR populations.

7. Ex-addicts in therapeutic programs who are involved in educational programs require a good deal of patience, attention and encouragement. These characteristics are not unlike those which other handicapped groups require.

8. Professionals at DVR and Topic House feel that educational involvement will help the residents by reducing the probability of their reversion to drugs and crime. The feeling was also expressed that the opening of new horizons will lead to exciting vocational and professional careers. It is hoped that a sharply-reduced recidivism will provide responsible citizens for society.

3:45 to 5:15 P.M.

REPORTING SESSION 4
TEACHER PERCEPTIONS

CHAIRMAN:

Peter F. Merenda, University of Rhode Island

PAPERS:

The Mosiac Composition of Urban School Teachers

DAVID K. WILES, Ontario Institute for Studies in Education

The purpose of this study was to assess physical and attitudinal characteristics of teachers, differentiated by the racial and economic composition of students taught, in an urban school system.

Teachers were tested for differences in race, sex, educational experience, grade taught and age. They were further assessed for differences in attitudes toward students, the job of teaching, and success of school program.

A total of 1150 teachers participated in the study. This represented over a third of all teachers in the school system. Information was obtained through a questionnaire designed for the study.

Respondents were divided by type of school in which they taught. Schools were designated "inner-city," transitional," and "peripheral" on the basis of racial composition of the student body and percentage of federal and state supplementary funds for disadvantaged children. The teacher sample size for each type of school exceeded three hundred.

Overall frequency distribution of teachers' answers were compared by Chi-square analysis with .01 level of significance assumed to represent actual difference. Specific differences between inner-city, transitional and peripheral schools were inferred from percentage distributions on possible responses.

This study generally supports the contention that urban teachers exhibit dissimilar physical characteristics and attitudes when differentiated by the racial and economic composition of the students they teach. The distribution of teachers differed significantly in grade level taught, ratio of males to females, and the ratio of white to non-white teachers. Teachers, also, differed significantly in perceptions of students, the effect of the school program, and the job of teaching. Teachers were more likely to be white, female, and teaching elementary grades when an urban school had a low percentage of non-white students who

came from economically disadvantaged families. Teachers were more likely to have positive attitudes about students, the job of teaching and the effects of the school program when teaching in an urban school whose students were white and economically well off.

Certain trends revealed general similarities in teacher attitudes which suggest as great an implication for urban education as recognition of systematic internal differences. Teachers, regardless of type of teaching situation, had positive attitudes about the job of teaching and the success of the school program with students. In spite of statistically significant internal differences, the majority of teachers in all categories were satisfied with their jobs and agreed that the school program was successful with students.

The large systematic difference among teachers in their positive feelings about students compared to the overall positive agreement about the teaching job and success of the school program suggests alternative explanations. Teachers cannot logically see children as failures yet judge the program successful. Teachers in peripheral schools may be overjudging the worth of their students. On the other hand inner-city and transitional teachers may be failing to face the discrepancy in their feelings about children, program and teaching.

-:- -:- -:- -:-

Information Processing Strategies of Professional Practitioners

MARJORY GORDON and JOHN DACEY, Boston College

Professional practitioners, it may be assumed, use some means of reducing the large amounts of discrete information they acquire about a client. The conception of the client that results probably forms the basis for professional actions. When viewed in this relationship to action, information processing is of crucial importance in the successful practice of the professional.

The information processing task is viewed as a multiple-concept-uncertainty-geared task. The uncertainty factor is due to the fact that cues are related to inferences in a probabilistic manner. In addition, multiple "problems" may be identified in a single client. These are two of the major differences that exist between simple concept attainment behavior and the complex concept attainment or inferential behavior engaged in by practitioners.

Using this model of the professional task, an exploratory study was done on ten teachers' and ten nurses' cognitive strategies in information processing. A reception paradigm, in which cues were given sequentially, was used as the design of the study. The subjects were asked to "think out loud" as they used the information on a case typical of one they would encounter in professional practice. Taped

protocols of the subjects' verbal behavior were analyzed in order to formulate hypotheses regarding cognitive strategies employed. Differences between the two professional groups were also the object of analysis.

The results of the study indicated that professional practitioners employ strategies in handling large amounts of information on a client. The complex nature of the task was seen as the major variable differentiating the strategies used by professionals from those used by subjects in other studies of simple concept attainment.

-:- -:- -:- -:-

A Comparison of Pre-service Elementary and Secondary Teachers in Their Selection of Priorities of Categories of Educational Objectives

PIERRE WOOG, Hofstra University

During the 1969 convocation of the N.E.R.A. (then named ERANYS) the author presented a paper entitled "A Q Study to Establish District-wide Priorities Assigned to Instructional Objectives" as a segment of the symposium, "The Recognition of Locally Perceived Instructional Objectives and Their Inclusion into an Instructional Program." This paper described the construction of a Q sort instrument which included one hundred items. These items comprised five categories of educational objectives: (a) tool skill, (b) low cognitive, (c) high cognitive, (d) affective personal, and (e) affective interactive. Twenty items were assigned to each category.

In the Spring of 1970 this Q sort was administered to two samples of pre-service teachers at Hofstra University to determine if there was agreement between the two groups in their assigned priorities of categories of educational objectives. One sample consisted of ten students taking a course in secondary education. The other sample included twenty-three students who were enrolled in an elementary education training program. All the students in both samples had received their Baccalaureate and expected to teach on a full-time basis beginning in September, 1970.

Each student's Q sort was analyzed using a one-way analysis of variance to determine whether priorities of categories had in fact been made. A significant, $a < .05$, F ratio was found in all cases.

To determine whether there was agreement between the two groups in their assigned priorities of categories of educational objectives the grand means per group, per category were compared using a Pearson Product Moment Correlation. The resultant r was .52, indicating a lack of significant relationship.

These findings suggest that the perceived objectives of education, at least for this sample of pre-service teachers, differs between elementary and secondary levels. It may be that the notion of commonality of K-12 objectives is open to question.

-:- -:- -:- -:-

An Investigation of an Instrument Battery Related to the Expectations of Student-centered Teaching Behaviors in Man: A Course of Study

RICHARD RIPPLE, Cornell University
SUSAN M. DALFEN, Ontario Institute for Studies in Education, and
SUE A. DEFFENBAUGH, Cornell University

A. The Nature of the Problem

The nature of the problem was the compilation and testing of a battery of instruments to assess the degree of student-centeredness exhibited by teachers using *Man: A Course of Study*. This social studies curriculum formulated by Jerome Bruner and others is an attempt, through the use of a process curriculum design and the inquiry method of learning, to stress the development of general cognitive skills. Using materials created from ethnographic film studies and field research, teachers and students study together the roots of man's social behavior through the examination of select animal groups and of the remote human society of the Netsilik Eskimo.

The following questions guided the research:

1. Which behaviors, operationally defined, constitute child-centered instruction?
2. What are the problems associated with the evaluation of child-centered, nondirective, dialectical teaching?
3. Which instruments most effectively and efficiently evaluate these behaviors?
4. Which child-centered behaviors and attitudes do teachers of *Man: A Course of Study* exhibit?

B. Methodology

A total of 24 *M:ACS* teachers responded to the written instrument, 20 were interviewed, and 12 observed in their *M:ACS* classroom, the last representing cluster samples from the Buffalo, Fredonia, and Cort-

land areas. A comparison group of ten fifth and sixth grade social studies teachers (who were *not* teaching *M:ACS*) from the same schools as those in the cluster samples were observed and completed specially designed written instruments.

The written instruments which were sent out included an opinionaire, the Draw-a-Classroom test, the Rokeach Dogmatism Scale, and a semantic differential. The twelve-item opinionaire was constructed to obtain both factual data regarding the sample of teachers and descriptive reports of classroom behaviors. The interview format used with the 12 *M:ACS* teachers was a six-item instrument designed to supplement the opinionaire and to tap reported classroom behaviors, as well as attitudes toward and cognitive command of the concept of student-centeredness. The observation techniques included the Flanders System of Interaction Analysis, an adapted form of the Ryans Classroom Observation Record, and an informal classroom record and checklist concerned with classroom organization, types and time sequence of activities, and objectives of the lesson. In order to provide baseline data for future evaluative efforts, comparisons were made between two groups of teachers, as well as between certain subgroupings within the *M:ACS* sample (on the basis of years of teaching experience, and method of induction into the curriculum) on their responses to the instruments in the battery.

C. *Conclusions*

The instruments were discussed in terms of their ability to elicit behaviors and/or attitudes which ranged along the entire continuum of student- vs. teacher-centeredness and in terms of the degree of student-centeredness exhibited by the particular samples in this study. With the exception of the Dogmatism Scale, two concepts in the semantic differential, and reservations about the Draw-a-Classroom test, the instrument battery was found to be usable in a general evaluation of teacher behaviors and attitudes relevant to the expectation of student-centeredness in *Man: A Course of Study*.

-:- -:- -:- -:-

Teacher Perceptions of Students in Academic and Special Programs

DONALD E. CARTER, SUC at Buffalo

Special programs for students with learning problems have flourished in recent years. Does the placement of a student in a special program influence teacher attitudes about the student? Research in the area of exceptional education has indicated that labeling influences attitudes. The purpose of this pilot study is to determine whether secondary teachers perceive students in a special program for the educationally disadvantaged as different from regular academic students.

Method

The semantic differential was utilized to determine teacher perceptions of student characteristics. Each of ten teachers were given fifteen names of students to be rated on twelve bi-polar scales. Five of the names were former or present students who were in a special program. Five were randomly selected average students and the remaining group of five students were matched in intelligence with the special program students. Multivariate and univariate analysis of variance was utilized to analyze the results.

Results

When compared over all scales, the groups were significantly different (Multivariate $F = 1.97$ with 24 and 242 df, P is less than .006). Although teachers do not perceive these groups as identical, there were no significant differences among groups on nine of the twelve scales. The three scale differences were: Teachers perceived special program students as slow, less mature and unsuccessful compared to the other two groups. Special program students and those with similar I.Q.'s are judged consistently lower than the average group.

When special program students were compared only with average students, the same three scales are significantly different. The twelve scales taken together are also significant, showing a difference in general perception.

On the other hand, when special program students and those similar in intelligence are compared, there is no overall or specific scale difference between the groups. Thus teachers classify them similarly. Further verification of this is found in the signifcant difference between average and similar I.Q. students over all scales and on the fast-slow, successful-unsuccessful scales.

These results show that teachers do have different perceptions of special program students, but in this study, the difference is attributable to the lower general ability of this group.

3:45 to 5:15 P.M.

REPORTING SESSION 5
DISADVANTAGED

CHAIRMAN:

Adolph Capuza, Tonawanda Public Schools

PAPERS:

The Use of a Structural Curriculum with Black Pre-school Disadvantaged Children

HENRY A. GOODSTEIN, University of Connecticut

An independent field trial of the Wann-Robison CHILD curriculum was implemented in seven pre-school classes in a large metropolitan city. This trial represented an effort to partially validate use of this structured curriculum with disadvantaged pre-school children.

The curriculum was adopted for a period of four months by four pre-kindergarten and three kindergarten teachers who volunteered to participate in the project. In order to partially control for factors of teacher selection, in-service training, and novel materials, teachers were utilized as their own controls. Each teacher taught one class, randomly selected, utilizing the structured lesson plans, while the other class (A.M. or P.M.) was taught utilizing the teacher's regular lesson plans.

A pretest-posttest design was used for assessment of experimental-control differences on two standardized instruments, the Peabody Picture Vocabulary Test and the Goodenough-Harris Draw-a-Man IQ test, and an author-constructed curriculum-related test, the Child Behavior Test (CBT). Pre-kindergarten-kindergarten differences were also assessed in the two-way analysis of covariance design.

Kindergarten children evidenced significantly ($P<.01$) more "regressed" growth on all measures employed in the study. Experimental children significantly outscored control children on three of the five CBT contrasts ($P<.01$).

Discussion was centered upon the need for more careful attention to the problems of continuous assessment of pupil progress within the various components of a total curriculum.

-:- -:- -:- -:-

Social Class Differences in Spontaneous Parent-Child Verbal Interactions

SELMA GREENBERG and RUTH FORMANEK, Hofstra University

A. A descriptive study of spontaneous verbal interactions between young children and their mothers, recorded in two settings, for the following purposes:

1. To test the contradictory hypotheses of Bernstein and Labov referring to socio-linguistic variables;

2. Study of social class differences in the development of verbal indicators of curiosity;

3. To find whether data can support the notion of middle-class enrichment via parent-child interactions, i.e., whether the "hidden curriculum" exists.

B. a. Verbatim protocols of spontaneous verbal interactions were recorded by an observer in the waiting rooms of two pediatricians.

b. 50 middle SES and 50 lower SES child-parent pairs; Children ranged in age from 3 to 6 years. No selection procedure was used and all pairs present in waiting rooms at given times were observed until the desired N was reached.

C. Data was analyzed according to formal and categorized properties of interactions: initiation of interaction, congruency of response, total numbers of types of linguistic units, comparison of types of units, etc.

Significant social class differences were found in most indicators analyzed, appearing to support the hypotheses of Bernstein, and point toward the presence of a "hidden curriculum."

-:- -:- -:- -:-

A Comparative Study of Strength and Coordination of Black and White Primary School Children

RICHARD J. MCCOWAN and SARAH R. BRINSMAID, SUC at Buffalo

Nature of the Problem:

Few controlled studies comparing the physical performance of blacks and whites have been completed. Those investigations which have been completed present mixed findings. Consequently, this pilot study was designed to determine if differences did exist between whites and blacks, as well as to gather base-line data which could be used in subsequent studies with the same population.

Methodology:

The 186 S's in this study were first, second, and third graders from the Campus Laboratory School at the State University College at Buffalo. Males and females were equally represented and approximately 38% of the students were black.

Each child was tested individually on nine physical performance tests, which could be classified into the two broad areas of strength (e.g., sit-ups, pull-ups, broad jump) and coordination (e.g., rope skipping, balancing on a balance beam). An ANOVA was used to examine differences between 1) males and females, 2) blacks and whites, 3) black males and white males, and 4) black females and white females.

Results:

No significant difference were observed either in the area of strength or coordination between males and females. However, whites achieved significantly higher scores ($p < .05$) in the area of coordination. Although blacks attained higher scores in those tests which measured strength, these differences were not significant.

Although no significant differences were observed when black females were compared to white females, white girls attained higher scores in coordination, while black girls had higher strength scores. White males, however, scored significantly higher than black males ($p < .05$) in coordination.

Any interpretation of the data is limited by the existence of uncontrolled variables, such as SES and IQ. The findings clearly indicate that white children, particularly males, perform more effectively on tests of coordination. Blacks, on the other hand, tended to achieve higher scores on tests of strength, although these differences did not reach the level of significance.

However, investigators have shown that disadvantaged blacks tend to have a significantly greater number of neurological abnormalities than whites. If it could be assumed that poor coordination is related to neurological impairment, perhaps this may account for the findings. Future studies will control for pertinent variables and examine other relationships, such as physical performance and achievement.

-:- -:- -:- -:-

The Pilot Intermediate Schools of New York City

VIRGINLA Z. EHRLICH and KAY C. MURRAY,
Board of Education of the City of New York

Nature of the Problem:

The intermediate school experiment organized the middle schools to include grades 5 or 6, 7 and 8, replacing the junior high school with

grades 7, 8, and 9. Major curriculum innovation was introduced in guidance, foreign language, humanities, typewriting, and creative and performing arts. The school organization included sub-schools, educational planning teams, departmentalization, and independent pupil study. The major objective of the new program was a greater emphasis on the needs of the individual pupil, especially in affective areas, and renewed concentration on human relations among ethnic groups and the problems of educationally disadvantaged pupils. The purpose of the research was to study the implementation of the program.

Methodology:

The study included statistical comparisons between pupils in pilot intermediate schools and comparable pupils in junior high schools on achievement in reading and mathematics, attitudes toward aspects of school, and self-concept. It also provided data on the implementation of the plans concerning the pilot intermediate schools, in terms of organization and administration, staffing, equipment and facilities, integration, and curriculum. Aspects of the study involved 1) two types of schools (14 pilot intermediate schools, with grades 5 or 6 to 8 or 9, and traditional junior high schools, with grade ranges from 7 to 9); 2) pupils who had been in the New York City public school system for three years and who were in the eighth grade at the time of the study, 1968-69; and 3) staff: principals, assistants-to-principal, guidance counselors, and teachers of the pilot intermediate schools. Instruments for data collection included the Metropolitan Achievement Tests in Reading administered in 1966 and 1969 and in Arithmetic administered in 1969; a Likert-type inventory, "How I Feel About School," which measured attitudes toward school and self-concept; semantic differential scales which measured attitudes toward four separate subject areas; questionnaires for staff; and curriculum guidelines which aided consultants in interviews with school staffs. Achievement and attitude test data were analyzed by means of analysis of variance techniques. Findings in the questionnaires and curriculum guidelines were summarized to provide qualitative as well as quantitative descriptions of the program and attitudes toward it.

Results and Recommendations:

Statistically significant differences (analysis of variance) indicated that comparison junior high pupils did better in arithmetic problem solving, while intermediate school boys had more favorable attitudes toward social studies and science.

School staffs were enthusiastic about the program. Implementation of the new curricula, developed prior to the initiation of the program, fell short of its goals. There was more progress toward desegregation in the intermediate schools. Little voluntary integrated socializing was found. The intermediate school plan needs to be more fully implemented before final judgment can be made.

-:- -:- -:- -:-

Patterns of Verbal Interaction in Classes for Disadvantaged High School Students

MILDRED KAYE, City University of New York

The purpose of this study was to examine the teaching process in high school classes for disadvantaged students by examining the linguistic behavior of teachers and students in social study classrooms. Analysis of verbal behavior was undertaken because there is an undeniable emphasis on verbal behavior in the high school learning situation. The study was designed as a descriptive model of what actually occurs in classrooms.

The subjects were five eleventh-year social studies classes and their teachers selected from among classes participating in the City University-Board of Education College Discovery and Development Program. All ninety-one students were from socio-economically deprived environments with records of academic achievement that failed to reflect their real learning potential. The subject matter for all sessions followed the prescribed course of study. A total of five tape recorded observations were made in each of the five participating classes. Verbal interaction was studied in terms of verbal "games."

It is clear that a "game" with well defined rules, regulations and goals was played in the observed classes. Teachers made the most moves and did the most talking. The main teacher pedagogical roles were soliciting and structuring. Responding was the pupils' primary responsibility. The primary emphasis was on substantive material commonly taught in the eleventh grade. The greatest percentage of all class sessions was devoted to teacher soliciting designed to elicit recall of factual information. The basic pedagogical pattern of discourse consisted of a teacher solicitation, followed by a pupil response, followed by pupil and/or teacher reaction (s). Occasionally, this was preceded by a teacher structuring move. Verbal interaction patterns were remarkably similar in all five classes. These same patterns have been documented in the literature from the time Stevens observed social studies classes in 1912 to Bellack's examination of verbal interaction patterns in social studies classes in 1966.

On the basis of the evidence collected, aside from structural and administrative reorganizations such as reducing class size, providing opportunities for student counseling, making tutorial assistance available, and occasional trips to cultural centers in and around the city, little that is new and/or different happened in the day-to-day teaching-learning situation in classes for disadvantaged high school students.

9:00 to 10:30 A.M.

REPORTING SESSION 6
DESIGN AND MEASUREMENT

CHAIRMAN:

Richard L. Egelston, SUNY College at Geneseo

PAPERS:

Some Considerations in the Design and Use of Criterion-Referenced Tests

PAUL C. ROSS, Training Research Group,
American Telephone and Telegraph Company

Overview:

This paper reviews some of the recent literature on criterion tests and summarizes the distinguishing characteristics that set criterion-referenced tests apart from the more traditional norm-referenced ones. Special attention is focused on the measurement characteristics that require special attention when criterion-referenced tests are used for the evaluation of instructional effectiveness.

Problem:

With the growth of the programmed instruction movement, there has been an increased interest on the part of program users and designers in testing and evaluation. Great care is generally taken in the design of the "criterion test" on which learners will have to perform. Often this test is used by the program user to measure the performance of learners so as to select them for some reason. While this misuse of the test is generally acknowledged, a precise understanding of how this misuse violates measurement theory is not apparent. Classical measurement theory does not seem to provide a sufficient base for the design and use of criterion-referenced measures.

Methodology:

A review of the recent literature was made and a summary of conclusions concerning the development and use of criterion tests was compiled. A discussion of the literature points out some of the problems one encounters with measurement theory when applied to criterion-referenced tests.

Conclusions:

Criterion-referenced tests are a special class of tests.

Item-analysis procedures and some validation procedures used with norm-referenced tests are misapplied when used with a criterion-referenced test.

Criterion-referenced tests have some desirable features for use in the evaluation of instruction.

-:- -:- -:- -:-

Item Analysis for Criterion-Referenced Tests

RONALD K. HAMBLETON and WILLIAM P. GORTH,
University of Massachusetts

In recent years there has been a great deal of use made of criterion-referenced tests particularly in the area of individualized instructional programs. Criterion-referenced tests differ from the more traditional and better understood norm-referenced tests. Norm referenced tests are designed for the purpose of comparing the performance of one student with others in the group. On the other hand, criterion-referenced tests are designed to compare the performance of each student against some criterion.

Since the purpose of these two kinds of tests is so different, it is not surprising that the traditional kinds of information concerning an item which are important for the construction of tests: item difficulty and item discrimination are less useful with criterion-referenced tests. Since criterion-referenced tests are becoming more and more commonplace in program evaluation and other areas, it is necessary to develop among other things, some appropriate item analysis procedures.

The purpose of this study was to outline some modified procedures for interpreting traditional item analysis data with criterion-referenced tests. In addition, some alternative item statistics were proposed and tested on some empirical data.

The data used in the study was made up of the responses of 150 students to ten parallel forms of a grade ten mathematics achievement test administered at equally spaced time intervals during the school year.

Preliminary results of this study suggest that while traditional item statistics can be used to interpret the effectiveness of an item in a test more useful item statistics including a statistic which measures the change in item difficulty over time is better.

-:- -:- -:- -:-

Stimulus Standardization for Individualized Learning Systems

HARRIS MILLER, University of Pennsylvania, and
GORDON WELTY, University of Pittsburgh

Following the technological breakthrough of the "Skinner box," and its benefits for learning theory, a similarly innovative mechanism was sought in the area of early childhood learning. The relatively inexpensive cassette recorder offered possibilities.

A critical measurement problem for employing cassette recorders in individualized early childhood learning systems is the lack of stimulus standardization. One argument for the use of these recorders is the potential for standardization they afford. However, a *teacher effect,* transmitted to the child through directions, rewards, etc., presents a confounding factor of serious proportions. This effect can be expected when the teacher is continually and significantly present throughout the child's use of the recorder. Teacher effect impairs both the educational researcher's ability to measure program effects, and the curriculum specialist's development of learning sequences. It also has learning theoretic ramifications outside our present scope, such as violating the "autotelic principle" of Moore and Anderson.

Several proposals by Rosenthal *et al* for coping with this sort of problem can be classed as (a) to estimate the magnitude of the effect or (b) to eliminate its possibility of occurrence. The former approach appears presently unfeasible, either on grounds of cost considerations or else because appropriate teacher training (and associated control) conflicts with teacher professionalism. We take the latter approach, and present the schematic for a cassette recorder control which incidentally provides the basis of a multimedia learning system.

In essence, we wire a probe, disguised as a ball-point pen, into the off-on switch of the cassette recorder. When a cassette embodying a particular learning sequence has been prepared, it includes photoelectrically triggered stops in the tape. The child restarts the tape by manipulating the probe just as he would a pen. The child has a booklet before him, coded to the learning sequence, which has several possible responses per tape pause (program frame). He touches the pen to a conductive inkspot below the correct response for the stimulus given by the tape. When the tape restarts, it is programmed to reinforce verbally the correct response given. Beneath incorrect responses are dielectric inkspots, visually indistinguishable from the conductive inkspots; hence the child gets no reinforcement for incorrect responses. We discuss further other materials necessary for such a self-contained man (child) -machine learning system.

Thus, following an initial orientation of the child, the teacher ceases to interact within the system. The stimuli are standardized and a potential source of error variance is eliminated. Implications of such a system for educational measurement and curriculum development are drawn. Specifically, we note the possibility of employing such a learning system as the basis of a revolution in the *teaching* of curriculum design and testing, much as the Skinner box has revolutionized the teaching of experimental psychology. To this end, all the materials needed to convert a cassette recorder and develop the system have been designed to be possible to be presented as a kit.

-:- -:- -:- -:-

A Bayesian Approach to the Completely Randomized Design

JAMES E. POWERS, SUNY at Albany

The purpose of this paper is to show a Bayesian approach to the completely randomized analysis of variance, including factorial arrangements of treatments. The proposed method is quite direct and the calculations necessary to derive posterior distributions are noticeably less than are necessary in most previously described approaches. It is therefore hoped that this paper will enhance the use of Bayesian methods, at least with the completely random design.

The approach set forth in this paper is applicable when sampling is from a normal population with known variance, as when measurements are made with a well standardized test or when sample size is large enough that the sample estimate of the variance can be used to replace the population variance. How large the sample must be is discussed in a related paper by Frank Hughes.

The essence of the method is specifying prior distributions on a set of orthogonal linear contrasts of the treatment means rather than on the treatment means themselves. By so doing, conceptual independence is obtained between the priors that must be specified. The calculations necessary to derive the posterior distributions are also greatly simplified since the need to evaluate a joint likelihood distribution is eliminated.

Having established the logic of this approach, the likelihood distributions appropriate for orthogonal linear contrasts will be developed through the use of the linear function theorem.

At this point the derivation of the posterior distributions on the orthogonal contrasts will be developed in two ways:

(1) When natural conjugate Bayes densities (in this case normal distributions) are selected as the priors for the contrasts. Since normal densities are often logical priors in practical situations, a theorem presented by Dennis V. Lindley will be generalized to show how the posteriors can be readily obtained from a table of ordinates of the standard normal curve in these situations.

(2) When non-normal priors are selected for the contrasts. In this case the likelihood distributions of the contrasts must be evaluated. However, it will be shown that the necessary likelihoods can also be easily obtained from a table of ordinates of the standard normal curve when orthogonal contrasts are employed.

A complete example illustrating each of the two solutions will also be included.

-:- -:- -:- -:-

An Investigation of a Sample Estimate as a Replacement for the Population Variance in a Bayesian Analysis of Variance

FRANCIS P. HUGHES, SUNY at Albany

In situations where the population variance is unknown and must be approximated by a pooled estimate of sample variances, the Bayesian analysis of the completely randomized design involves a large number of calculations. Even with high-speed computers, the programing aspects of the problem are not trivial. However these calculations simplify to a great extent if the population variance is known. Therefore, this study was undertaken in an attempt to determine when it can be safely assumed that the pooled estimate of the sample variances can be used in place of the population parameter without drastically altering the results of the analysis.

To accomplish this task, two computer programs developed by Dr. James E. Powers, presently at SUNY at Albany, were used. One program performs the Bayesian analysis when the population variance is not known, while the other is employed when the value of this parameter is known. Both programs were run on the UNIVAC-1108 computer at SUNY, Albany.

The number of treatments to be investigated in this study will vary from two to eight. For each of the possible number of treatments, random normal samples will be generated, having $\mu = 10$ and $\sigma^2 = 9$. The size of these samples will also be varied within each of the possible number of treatments. Using these sample values a pooled estimate of the variance will be calculated, and the Bayesian analysis, when the population variance is unknown, will be performed. Then, the same samples will be used in the Bayesian analysis with this parameter known, since the pooled estimate previously computed will be used as a replacement for the population variance.

Each of the analyses results in a posterior distribution on values for each linear contrast specified. These posterior distributions will be compared for differences in comparable values large enough to be of importance to the analysis. It is anticipated that both posterior distributions for each linear contrast will be plotted on the same axis, thereby providing a better picture of the comparison. Thus, it is expected that a decision can be reached as to when the pooled estimate can be used to replace the population variance in a Bayesian analysis of the completely randomized design.

At this time, the two programs are being combined to perform the tasks previously described, and no results are available.

-:- -:- -:- -:-

Scoring Creativity Tests by Computer Simulation: Recent Developments

JOHN GREENE, University of Bridgeport

Purpose:

The major purpose of this study is to further the development of procedures which will minimize the current limitations of creativity instruments, thus yielding a more reliable and functional means for assessing creativity. Allied aspects of the major purpose include the relationships between creativity judges and the independence of the three dimensions of creativity considered in this research (fluency, flexibility, and originality).

Methodology:

Computerized content analysis is employed to simulate the creativity ratings that trained human judges make in the process of scoring the free, open-ended responses to creativity tests. Four activities from the *Torrance Tests of Creative Thinking* serve as the basic source of data upon which reliable and functional scoring strategies are developed, but these strategies are not necessarily limited to this particular test battery.

In an effort to maximize the reliability of the human creativity ratings, analysis of variance procedures are used. A step-wise multiple regression technique is employed to maximize the prediction of each subject's scores for each activity. The predictors include actuarial and dictionary parameters. Besides the full model, restricted and forced multiple regression models are generated. The entire computerized scoring procedure is then evaluated in a cross-validation sample.

Simple correlation analyses are utilized in determining the relationships between judges and the dimensionality of the instrument.

Results:

The results of the multiple regression analyses must be considered most encouraging. The full model coefficients for fluency range from .92 to .99. The range for flexibility is .84 to .91, while the originality range is bounded by .73 and .87. The restricted and forced model results parallel those of the full model, but, as expected, they are slightly lower.

Except for the flexibility and originality dimensions in the final activity, excellent attenuated cross-validation correlations are realized. These correlation coefficients range from .79 to .96. Each is significant beyond the .01 level, and, more importantly, each one indicates that the corresponding equation is capable of excellent prediction. The moderate results of the two dimensions of the final activity cited are

.56 and .48. Using a procedure developed by this writer in which stability of the predictors is considered, these correlations were increased to .77 and .70 in the forced model.

The relationships between scorers are not as high as those reported by Torrance; however, the pooled reliabilities are high and range from .66 to .99. Evidence yielding new support for the dimensionality of certain activities is also presented.

TUESDAY, NOVEMBER 17 T.V. ROOM

9:00 to 10:00 A.M.

REPORTING SESSION 7
SELF CONCEPT

CHAIRMAN:

W. Robert Kelley, SUNY at Albany

PAPERS:

A Review of Recent Research on the Self-Concept

CATHLEEN M. KUBINIEC, Temple University

The purpose of this paper is to review recent research on the self-concept. The review includes an historical overview of the directions self-concept research has taken, a summary of types of instruments employed to measure the self-concept, a delineation of and differentiation between various constructs employed as dimensions of the self-concept, and an overview of empirical research relating the self-concept to behavior.

-:- -:- -:- -:-

Self-Perception-in-School

JEAN M. ALBERTI, SUNY at Buffalo

The purpose of this research was to develop and validate a self-report, group-administered, non-verbal inventory to measure SELF-PERCEPTION-IN-SCHOOL [SPS] among primary grade children.

Inventory items were based on Sarbin's Role Theory. Since role may be studied in terms of the actions expected of an occupant of that position, in this study, the *role of student* was defined as *those behaviors teachers expect of students.* From this universe, a set of items was devised. Three pilot studies were conducted.

In the major study, the Self-Perception-in-School [SPS] inventory was administered to a sample of 656 first-, second-, and third-graders in two schools of a white middle-class suburban system. Internal consistency and stability coefficients were obtained. Responses to the SPS on the group-testing and the individual-testing were correlated as a measure of convergent validity. This correlation was not significant. Social desirability scores were correlated with the SPS scores [both group- and individual-administration]. Neither coefficient was significant. Principal components analyses with normalized varimax rotations for each grade/sex group of the original group were performed. The SPS was multidimensional. However, there was no observable tendency for items to cluster in definable patterns for the various grade/sex groups.

It was concluded that:

1) The SPS inventory is a reliable, valid, inexpensive, non-verbal measure of the construct at the primary level.

2) The structure of the "self" is not unidimensional.

3) The SPS is significantly related, at the primary level, to teachers' ratings of children's behavior and to reading and arithmetic achievement.

-:- -:- -:- -:-

Effects of Changes in Academic Roles on Self-Concept-of-Academic Ability of Black and White Students

HENRY D. OLSEN, SUC at Buffalo

Symbolic interaction is a theory within the discipline of social psychology developed by George Herbert Mead (1934) and applied to the educational setting by Brookover and his associates (1965).

The term self-concept-of-academic ability is defined as ". . . the evaluation one makes of oneself with respect to the ability to achieve in academic tasks in general as compared with others."

Brookover has investigated the nature of self-concept-of-academic ability and studied its effects upon the school achievement of a class of urban 7th through 12th graders. His conclusions were:

1) Self-concept-of-academic ability is a significant factor in achievement at all grade levels.

2) The perceived evaluations of significant others are a major factor in self-concept-of-academic ability at each grade level.

3) Change or stability in the perceived evaluations of others is associated with change or stability in self-concept.

4) The relationship of self-concept to achievement is not associated with school attended.

5) Self-concept is not merely a reflection of memory of past performance.

In earlier works Brookover (1968) notes that man is highly dependent upon his fellow man for the satisfaction of most of his needs and desires; for this reason he becomes aware of these attitudes and usually attempts to satisfy them by his behavior in specific roles. Further that if these roles change then the specific attitudes and roles change.

Thus, this research attempts to answer the following questions:

1) What changes take place in the self-concept-of-academic ability of those black and white students who were previously compensatory education students (CESs) and are now regularly matriculated students (RMSs)?

2) What changes take place in the significant others (SOs) and academic significant others (ASOs) of previously enrolled CESs who are now RMSs?

3) How does a RMS who was formally a CES now compare himself with other RMSs, and present CESs, with respect to self-concept-of-academic ability?

The population will be defined as high school graduates who have entered the compensatory education program (CEP) in September, 1968, and are now RMSs. This study ascertained data on the following: General Self-Concept-of-Academic Ability Scale, Referent Self-Concept-of-Academic Ability Scale, Significant Others Test, and Academic Significant Others Test, for all those students enrolled as a RMS who was previously a CES. All instruments utilized in this research have been adapted from Brookover's longitudinal study of self-concept and school achievement.

The population for research purposes, has been catagorized according to sex, race and college status. The instruments have been administered in as matter-of-fact fashion as possible. And, by keeping the social setting constant.

The analysis of data indicates that there is a significant positive change in self-concept-of-academic ability as a result of change of college status from compensatory education student to a regularly enrolled student. However, when race is considered there is no significant difference in change of self-concept-of-academic ability. Thus, it can be concluded that although the change in self-concept-of-academic ability was significant, the black student changed as often or as little as the white student.

On the pre-test the students identified in respective order, parents, relatives, friends, offspring, teacher, spouse and self as significant others. On the post-test changes took place in the categories of offspring, friends, teachers, spouse and self. There were no changes in parents or friends. The academic significant others identified, in respective order, were parents, teachers, friends, relatives, offspring, spouse and self, with changes in spouse and self being significant.

When a former compensatory education student compares himself with another compensatory education student he perceives himself to be superior academically. Whereas, when the former compensatory education student compares himself with a regularly enrolled student he perceives himself to be equal to him academically.

The Relationship Between Creativity and Social and Academic Acceptance of Third Graders

FORREST WAYNE BENSON, Buffalo School System

Purpose of the Study:

The purpose of this research was to evaluate the relationship between creativity and social acceptance of third grade students. The research to date done by Torrance, Getzels and Jackson, Yamamato, Olson, Rivlin, Choeng and others, indicates a polarization of these findings. This study clarifies some of these differences.

Methodology:

Sample: Forty heterogeneously grouped third grade students at the Campus School of the State University College at Buffalo participated in this study.

Instruments: The subjects responded to a social and academic question using the Bonney Fesseden Sociometric Scales. Creativity sub-scores of fluency, flexibility, originality, elaboration and composite score were determined using the Torrance Creativity Test.

Analysis of the data: A Pearson product-moment correlation was computed for the variables using a University of Buffalo 320 Computer.

Results and Conclusions:

The creativity scores of originality, fluency, elaboration and the composite scores demonstrated significant relationships with social acceptance. (.31, .41, .66, and .61 respectively.) The creativity scores of fluency, elaboration and the composite scores showed significant correlations with academic acceptance. (.45, .40, .34, respectively.)

Higher correlations appeared between creativity and social acceptance than between creativity and academic acceptance. Originality and flexibility had the lowest relationships with acceptance. Elaboration, fluency and the composite scores had higher correlations with acceptance.

These findings support the idea that highly creative third grade students receive higher peer acceptance than lower creative children. However, certain types of creativity have much lower correlations with peer acceptance than other types of creativity. This study indicates the child who can give the most sensible ideas and have them make sense have high peer acceptance rather than the student who has the most unusual ideas.

More research is needed to compare different types of creative ability with peer acceptance. Perhaps this would lead to better insight into what creative talents lead to high peer acceptance.

10:50 to 12:20 P.M.

REPORTING SESSION 8
ADMINISTRATION

CHAIRMAN:

Frank Ambrosie, SUNY at Buffalo

PAPERS:

A Comparison of Halpin and Croft's Organizational Climates and Likert and Likert's Organizational Systems

JOHN W. HALL, St. Lawrence University

Purpose of the Study:

The purpose of this study was to determine the commonality or lack of commonality of the Halpin and Croft organizational climate model and the Likert and Likert organizational system model. This study sought to answer questions about the extent of congruence between the *Organizational Climate Description Questionnaire* which was developed on the basis of the Halpin and Croft organizational model and the Likert and Likert's *Profile of a School* instrument which was developed on the basis of the Likert organizational model.

Methodology:

Halpin and Croft's *Organizational Climate Description Questionnaire* (OCDQ) and Likert and Likert's *Profile of a School* instrument (teacher-form) were administered to the teachers of forty-three elementary schools of Northern New York State.

Halpin and Croft's organizational climates were converted into a continuence of openness. The statistic, Pearson's product-moment correlation, was then used to determine the relationship between the *Organizational Climate Description Questionnaire* and the *Profile of a School* instrument (teacher-form). Chi square was also applied to determine the relationship between Halpin and Croft's organizational climates classified as open and closed by the *Organizational Climate Description Questionnaire* and Likert and Likert's organizational climates as classified as Systems I and II and Systems III and IV by the *Profile of a School* instrument (teacher-form).

In addition, relationships between the organizational climate measured by the *Organizational Climate Description Questionnaire* and the organizational systems assessed by the Likert and Likert framework was treated by means of multiple correlation analysis.

Results and Conclusions:

It was found that there is a positively significant relationship between Halpin and Croft's organizational climates as classified by the

Organizational Climate Description Questionnaire and Likert and Likert's organizational systems as classified by the *Profile of a School* instrument (teacher-form). This supports the concept that the Halpin and Croft organizational climate model from which the *Organizational Climate Description Questionnaire* was developed is comparable to the Likert organizational system model from which the *Profile of a School* instrument was developed.

-:- -:- -:- -:-

Decisional Deprivation Equilibrium and Saturation as Variables in Organizational Research Concerning Educational Institutions

JOSEPH ALUTTO and JAMES BELASCO, SUNY at Buffalo

In this study of school teachers (N=427) employed in two separate school districts, the variable decisional participation was conceived as the difference between the number of decisions in which an individual teacher desires to participate and the number of decisions in which he actually participates. This method of operationalizing decisional participation lead to the identification of three decisional states or conditions; deprivation, equilibrium and saturation.

After identifying subjects characterized by conditions of decisional deprivation, equilibrium and saturation, it was shown that individuals in each of these groups differ by age, sex, teaching level, employing organization, seniority, perceptions of administrative influence, perceptions of role conflict, and attitudinal militancy. This research also suggested modification of some assumptions about the consequences associated with increased participation in decision making. For example, there was no evdence that decisional participation leads to increased organizational commitment as Patchen has suggested. Nor does this research suggest that shared decision making is a viable administrative strategy for all segments of the teaching population. Finally, this research provides verification for those who have assumed that conditions of decisional deprivation constitute one of the bases for the increased militancy evidenced among members of the teaching profession.

-:- -:- -:- -:-

Longitudinal Analysis of Absence Behavior

R. OLIVER GIBSON, SUNY at Buffalo

Problem:

Absence is a form of behavior of employees in organizations that has received considerable attention in a number of organizations, particularly business and industry. The studies of absence of school personnel are relatively few. Typically total days absent during a period of time is used as the measure without distinguishing between frequency and duration of absences. The purpose of the study was to study *frequency* and *duration* of absence of school personnel (dependent variables) over time with relation to selected personal and system variables.

Methodology:

Data were collected in 1959-60 in a Boston suburban school district for the years 1938-9, 1948-9 and 1958-9. Similar data were collected in 1969-70 for the year 1968-9. Record keeping had been maintained with care over the period of time. Information was available on age, sex, marital status, type of work and length of service. Data were collected for all employees for each year. For the first three years data were taken directly from the records. Subsequent tabulations provided a basis for grouping of data and development of a code sheet used in the last year.

The analytic framework is one of social exchange which views the employee and system as engaged in a process of exchange of rights and duties. This formulation leads to expectations regarding level of identification, "credit" with the system, and status in the system. Degree of association is assessed by percentage, correlation (gamma) and X^2. Selected variables are analyzed using other variables as control variables. Comparative analysis of behavior of continuing groups is also undertaken.

Conclusions:

There was a general tendency throughout the period for frequency of absence to increase. This finding is consistent with increasing legitimacy of absence and decreasing emphasis upon institutional loyalty. Frequency of absence was more associated with married than with single status suggesting that married personnel may have greater external (family) identification as compared with single personnel (internal orientation). Continuing personnel were more consistent with their peers at any point in time than they were with themselves either earlier or later. This study suggests that it may be useful to view absences as social phenomena related to values and related normative structures.

Design of Operational Model for Application of Planning-Programming-Budgeting Systems (PPBS) to Local School Districts

CHESTER KISER, SUNY at Buffalo

Purpose:

The purposes of this paper are to: (1) present an overview of a current project in the eight counties of Western New York aimed at inventing and field-testing an operational PPBS*model for local school districts; and (2) report, at the end of the project's first year, the accomplished design of the PPBS operational model. The promise of PPBS for education is that use of systems-oriented concepts and techniques will increase school district effectiveness through improvement of: (1) planning processes; and (2) decision making processes with regard to the rationality of instructional and support activities, and the rationality of resource allocations.

Procedures:

The project's target area was specified as the 106 school districts in the eight counties of western New York. The Maryvale school district, in Erie County, obtained an ESEA Title III grant and served as the prototype district for model invention. In developing the operational PPBS model, the project staff was guided by certain concepts from systems theory and by a number of research and development questions prompted by these systems concepts. Personnel from the Western New York School Development Council provided technical assistance in developing the model.

The year ended June 30, 1970 was devoted to design of the PPBS operational model, prior to field-testing it during 1970-71. As elements of the model were designed, they were reviewed by a PPBS Advisory Committee in Maryvale, as well as by representatives of various regional organizations, to help insure the model's practical usefulness.

Conclusions:

At the end of the first year, the model has been completed in the form of an illustrative systems manual; and plans have been made to field-test the model in five school districts. The model presents scores of subsystems for an integrated planning-programming-budgeting system for school district use. A central concern of the model's *planning component* is provision of sensory mechanisms to insure that ideas from within and without the system are fed into the district's planning processes.

The *programming component* contains an illustrative program structure based on the notion of three types of work-direct, support and command-and Likert's linking-pin concept. A central feature of the pro-

*Planning-Programming-Budgeting System

gramming component is presentation of an illustrative, detailed cost-benefit methodology. The aim of this procedure, which is known as an Instructional Systems Analytical Study (ISAS), is to illustrate a method of selecting from among alternative methods for program-mission accomplishment an optimum method.

The *budgeting component* of The Western New York PPBS Model presents illustrative procedures for developing a multi-year finance plan to accompany a multi-year program plan, as well as procedures for budgetary control that permit flexibility of expenditures on the part of program directors.

In all of its procedures, the operational model is designed to clearly illustrate to educators who are not sophisticated in systems techniques: which actors need to perform what tasks, and how the tasks are to be performed, in order to actually implement PPBS in a local school district.

-:- -:- -:- -:-

State Political Process Change and Education Interest Group Political Behavior

ROBERT E. JENNINGS, SUNY at Buffalo

The objectives of the study was to determine the influences of changes in New York State political and legislative processes on the political behavior and strategies of education interest groups in seeking state policy change for education. As interest groups seek their objectives they attempt to reduce conflicts of party and of legislature and governor. Structural and functional changes in the political and legislative processes change the framework in which conflict takes place. As the framework changes it would seem that interest group behaviors and strategies also change. Iannaconne's taxonomy notes the developmental political behavior of educators' organizations is from entreprencurial to cooptational to competitive to coalitional. He goes on to say that if the larger political system is undergoing realignment it is probable, but not inevitable, that so also will the politics of education move from one phase to the next.* Lack of data on the interaction between political behavior of each phase and state process changes prevented him from making a more definitive statement. It is the influence of this interaction which this paper discusses.

Historical methods were utilized in examining the problem. The years between 1920 and 1969 contain a number of changing frames of political and legislative processes in New York State. The same years saw the education groups move from individual group action into a cooperative organization and joint activity. Following a review of literature, a document search was employed utilizing legislative and organization

*Laurence Iannaconne, *Politics in Education*, New York: Center for Applied Research in Education, 1967, pp. 73-74, 80-81.

committee reports, minutes of meetings including annual meetings and executive committee sessions of several education groups. Newspaper reports, news analysis and editorials were examined. These items were supplemented by interviews with participants and observers where possible.

Analysis of the data included: 1) Notation of proposals for state policy change, a) origin, b) consent building activities by interest groups, c) reactions of others, counterproposals, d) resolution of differences, e) results. 2) Identification of the legislative or political process frames and the ways in which the points in item 1 were handled within various frames. 3) Isolation of the differences in behaviors and strategies of the organizations in the changing frames in successive years. 4) Identification of relationships between items 2 and 3 based on decisions made in the organizations, activities undertaken and those not undertaken.

Results indicate that the rise of a strong executive branch, dominating the legislative, reduced conflict in government and the number of viable points of access to policy process available to the interest groups. Cooptive behavior, developed earlier by the groups for influencing a more co-equal legislature, was utilized to induce the executive to modify its policies. This behavior concentrated the activities of the groups, but at the same time, decreased the range of policy issues on which they cooperated. The executive later created a controlled conflict frame in which it could utilize several policy shaping centers, i.e.: special commissions, the education bureaucracy, legislative study committees. It could also take limited advantage of geo-political splits in the legislature. The narrowed front of the education groups, brought about by cooptive behavior, reduced their effectiveness due, in large part, to an inability to develop needed points of access within the changed frames.

The implications of the study are that competitive behavior will develop among the education groups of New York next if 1) the executive can no longer maintain controlled conflict, and 2) the groups individually begin to emphasize several separate issues from differing points of view. The coalitional behavior will develop next if 1) the executive continues to control conflict and 2) it can channel major issues into this frame.

Educational Policy Making in New York State: Perceptions of the Process within the Legislature

ROBERT E. JENKINS and MAX M. MILLARD, SUNY at Buffalo

The problem was to describe and analyze the educational policy making process at the state level, focusing on the role of the legislature. A purpose of the study was to compare perceptions of the process in the legislature as held by education interest group staffs with perceptions

of legislators and identify similarities and differences about various elements, including formal and informal roles of individuals and groups. A behavioral approach was utilized in order to get beyond the institutionalized views of the process.

The methodology employed included structured interviews with executive officers and/or their associates in six major education interest groups, and a survey of legislators utilizing an in-depth personal interview. Sustained efforts were made to interview all 207 legislators during the 1969 session, however, complete interviews were obtained with only 60 per cent of the members. The interview for interest group personnel, devised for the study, was based on previous work of the two co-investigators. The interview schedule for legislators was an adaptation of an instrument developed by Wahlke, *et al*, in 1957 for a study of four state legislatures. As a check on information obtained, interviews were conducted with legislative staff members, officials in the executive branch and other knowledgeable observers of the legislative scene.

In the analysis, the perceptions of staff personnel in each of the interest groups were categorized as to the role of the legislature, how legislation is moved, the roles of committees, committee chairmen and the legislative leadership, the function of legislative experts, the influences of party and governor, as well as an estimate of the influence of the interest group. The responses of the legislators were tabulated and frequency distributions obtained for each of the same categories. In addition, differences in the handling of education bills noted by legislators as well as their opinions of education interest group influence were compiled. Comparisons were made of the several sets of responses and similarities and differences noted.

The results indicate there are several critical differences in perceptions of the process held by interest group staffs and legislators. Items which have implications for state spending are considered as party bills which is a critical fact to legislators and difficult to change in the view of the interest groups. The legislative leaders are perceived as very important influences on the process but the groups generalize this influence to almost all proposed measures whereas legislators ascribe more influence to committee chairmen on routine items and the leadership on party measures. The interest groups underestimate the role of experts as informal opinion leaders in the legislature. The influence of the governor, perceived by legislators, is in his veto power and control of patronage. The education groups see his role as one of setting program and convincing the legislative leadership that they must get it passed. The groups see themselves as effective in educational legislation, a result not entirely unexpected. Legislators have a hierarchy of group effectiveness related to the strength of education in their home districts rather than to the activities of the interest groups at the capitol.

The implications of the findings for educational policy making are several. The relative independence from the leadership enjoyed by legislators and committees in non-party measures should lead to greater differentiation of strategies according to proposals. The differentiation

between the formal leadership and informal opinion leaders in the legislature would be helpful in this process. The groups should make more analyses of the political implications of proposals. These latter two implications reach back into home areas of legislators. Thus it would seem that more efforts could be directed at the grass roots level by the education interest groups.

10:50 to 12:20 P.M.

REPORTING SESSION 9
PROBLEMS IN MEASUREMENT

CHAIRMAN:

Frances C. Morrison, Ottawa Schools

PAPERS:

Category Width as a Moderator of Risk-Taking in a Psychometric Context

STANLEY S. JACOBS and RONALD J. HRITZ,
University of Pittsburgh

A. Introduction:

Research by Hritz and Jacobs (1970) has demonstrated that the assessment of partial knowledge through the use of Coombs type directions (CTD) (Coombs, 1953; Coombs, Milholland and Womer, 1956) results in data contaminated by individual differences in risk-taking.

The purpose of the present study was to examine the hypothesis that differential risk-taking behaviors are associated with cognitive variables; specifically, the variable of category width. Pettigrew (1958) has suggested that S's exhibiting broad categorizing behaviors are exhibiting a tendency to maximize the number of positive instances, at the risk of including negative instances. Narrow categorizers, in an attempt to minimize the negative instances, would also reduce the incidence of positive occurrences. Pettigrew has presented data which indicates categorizing behavior is a stable, sex-linked aspect of personality. An analog of categorizing behavior may occur in the use of CTD, where the task for S is the identification of from 1 to n—1 incorrect distracters in a set of n options, rather than the identification of a single correct option.Under CTD, S typically receives one point credit for each correct identification, but loses n–1 points if he identifies the correct answer as incorrect. Item scores, rather than the conventional 1–0 for pass or fail, can range from + (n–1) to – (n–1) points.

B. *Methodology*:

a) *Sample*:

The sample of 94 males and 60 females in the present study was drawn from the enrollment of two sections of an introductory graduate course in educational research at the University of Pittsburgh. Participation in research was a part of the course requirement.

b) *Procedure*:

S's completed a multiple choice category width (CW) scale (Pettigrew, 1958) and the Quick Word Test (QWT) (Borgatta and Corsini, 1964). The former was presented as a "problem

in estimating items of general information"; the latter was administered using CTD. A measure of risk-taking on the latter instrument was developed for each *S* using Danielson's index (Slakter, 1967).

c) *Analysis*:

The reliability of the CW scale was estimated, using Cronbach's alpha, to be .85, indicating a substantial first factor concentration (homogeneity) in the instrument. The reliability of the QWT was similarly estimated to be .93, also indicating satisfactory homogeneity.

Subjects were first classified by sex; then the extreme 10 scorers in each tail of the CW distribution, and 10 from about the median were selected within each classification to provide three levels of categorizing behavior. A two-way ANOVA was performed, using risk-taking scores as the criterion measure.

C. Results:

Risk-taking scores, as a function of sex and level of CW, are summarized in Table 1.

Tabe 1

RISK-TAKING SCORES, BY SEX AND LEVEL OF CW

Sex	Broad			Median			Narrow		
	n	$\bar{x}$	s. d.	n	$\bar{x}$	s. d.	n	$\bar{x}$	s. d.
Male	10	1.34	.89	10	1.03	.53	10	1.28	.56
Female	10	1.16	.83	10	1.60	.91	10	.99	.75

A two-way ANOVA indicated that the effects due to sex and level of CW were not significant at the .05 level, nor was the interaction significant.

Despite the close analog in required behavior, there is no evidence that the cognitive variable of category width is related to risk-taking as defined in the present study.

REFERENCES

Borgatta, E. F., and Corsini, R. J. *Quick Word Test.* New York: Harcourt, Brace and World, 1964.

Coombs, C. H. On the use of objective examinations. *Educational and Psychological Measurement,* 1953, *13,* 308-310.

Coombs, C. H., Milholland, J. E. and Womer, F. B. The assessment of partial knowledge. *Educational and Psychological Measurement,* 1956, *16,* 13-37.

Hritz, R. J. and Jacobs, S. S. Risk-taking and the assessment of partial knowledge. Proceedings, *78th Annual Convention, American Psychological Association,* 1970, 171-172.

Pettigrew, T. F. The measurement and correlates of category width as a cognitive variable. *Journal of Personality*, 1958, *26*, 532-544.

Slakter, M. J. Risk taking on objective examinations. *American Educational Research Journal*, 1967, *4*, 31-43.

-:- -:- -:- -:-

Fakability of the Edwards Personality Inventory: Booklets I, II and III

JOHN J. TINLEY and JOHN R. BRAUN, University of Bridgeport

Problem:

The Edwards Personality Inventory (EPI) consists of five 300-item booklets providing scores on a total of 53 personality variables descriptive of the behavior of normal individuals. The EPI has two special features. First, contrary to other inventories, the examinee is asked to respond to the EPI items as he believes those individuals who know him best would answer if asked to describe him. Second, in developing the EPI, a deliberate and systematic attempt was made to minimize the correlations with social desirability of most of the scales. To the extent to which social desirability was controlled in the EPI, we might expect faking possibilities to be reduced. Braun (1970) investigated the fakability of Booklet IV, with one group given standard instructions, and another given instructions to create a favorable impression of themselves while also concealing their faking. It was found that the faking instructions had significant effects on only three of the 13 Booklet IV scales. The present study investigated whether EPI Booklets I, II, and III would show similar resistance to faking.

Methodology:

201 undergraduate university students were randomly assigned to either a control group completing one of the EPI booklets (I, II, or III) under standard instructions, or an experimental group under faking instructions. For all 40 scales comprising the three booklets, *t* tests were used to assess the significance of the difference between control and experimental group means.

Results and Conclusions:

Table 1 presents the basic descriptive data. Differences between control and experimental means reached significance ($p = .05$) on 17 of the 40 scales. The three booklets differed among themselves in fakability, with only one variable significantly influenced by faking instructions for Booklet II, but with eight variables affected in both Booklets IA and III. Pooling data from the present study with those of Braun (1970) on Booklet IV, a total of 20 of the 53 EPI scales were fakable. Results suggest that Edwards was not successful in controlling for social desirability. Reasons for this may involve the operation of contextual effects on judgments of social desirability, and the existence of individual viewpoints regarding what is desirable.

Table 1

MEANS AND *T* VALUES FOR CONTROL AND EXPERIMENTAL GROUPS FOR BOOKLETS IA, II, III, AND IV

Variable	Booklet IA Control Mean (N=33)	Booklet IA Experimental Mean (N=34)	*t*
A	11.82	15.97	3.33**
B	18.61	24.94	4.80**
C	11.39	14.79	2.74**
D	10.88	14.03	3.77**
E	8.00	12.35	4.65**
F	7.42	6.76	0.79
G	12.73	15.26	2.34*
H	8.73	7.76	0.96
I	11.24	16.18	3.60**
J	14.12	13.68	0.47
K	11.30	9.94	1.02
L	11.85	11.12	0.98
M	8.21	9.65	2.01*
N	19.03	21.62	1.76

Variable	Booklet II Control Mean (N=34)	Booklet II Experimental Mean (N=33)	*t*
A	16.59	12.45	1.93
B	5.91	6.91	1.18
C	17.15	17.97	0.58
D	7.41	6.56	0.60
E	15.21	13.12	0.78
F	8.62	5.12	3.53**
G	11.68	9.55	0.71
H	8.32	6.34	1.03
I	11.41	11.09	0.05
J	6.59	5.85	0.60
K	20.18	16.36	1.10

Variable	Booklet III Control Mean (N=33)	Booklet III Experimental Mean (N=34)	*t*
A	16.06	19.18	2.70**
B	7.73	9.00	2.36*
C	15.24	16.82	1.27
D	18.58	24.09	2.48*
E	16.61	17.32	0.54
F	12.94	15.56	2.66**
G	9.94	14.29	3.07**
H	9.45	10.56	1.14
I	5.55	6.71	2.01*
J	9.06	11.38	2.61*
K	5.39	6.29	0.89
L	11.91	12.53	0.68
M	5.48	6.38	1.60
N	17.97	19.21	0.78
O	6.79	8.12	2.21*

Variable	Booklet IV+ Control Mean (N=53)	Booklet IV+ Experimental Mean (N=55)	*t*
A	13.58	13.75	0.09
B	10.47	9.64	0.57
C	10.77	10.40	0.44
D	11.96	9.93	1.62
E	7.15	5.53	2.28*
F	16.62	17.91	0.96
G	5.40	5.38	0.03
H	15.60	15.93	0.51
I	19.72	21.07	1.52
J	8.36	7.18	1.05
K	6.96	6.93	0.03
L	4.81	6.67	2.58*
M	12.81	16.95	3.29*

* significant at the .05 level
** significant at the .01 level

Braun, J. R., Edwards Personality Inventory, Booklet IV: Faking and Faking Detection. *Measurement and Evaluation in Guidance*, 1970, in press.

-:- -:- -:- -:-

A Comparison of Conventional Choice Testing and Various Confidence Marking Procedures with Respect to Validity

ROGER A. KOEHLER, SUNY at Buffalo

It has been suggested that confidence marking will yield more valid scores on objective examinations than conventional choice responses. Confidence marking allows an examinee to respond to each item alternative in terms of his belief that each alternative is the correct answer (i.e., examinees can express varying degrees of partial information). Conventional choice testing, on the other hand, can only indicate complete certainty or complete uncertainty. The purpose of this study, therefore, was to compare two confidence marking techniques and the conventional choice testing procedure with respect to construct validity.

In this study, construct validity was assessed through the convergent and discriminant validation process, which involves the observation of correlational patterns within multitrait-multimethod matrices. Achievement in vocabulary, social studies, and science (traits) was measured by a 60-item test containing true-false and five-alternative items (methods). The test was administered to three randomly assigned groups, totalling 535 S's. Two groups of S's were asked to respond to the test items using, respectively, the two confidence marking procedures, while the third group used the conventional choice procedure.

An examination of various scoring functions employed with confidence marking techniques indicated that only the confidence assigned to the keyed alternative was worthy of further investigation. In addition, there did not appear to be any basis for distinction between the two confidence marking techniques employed. A comparison of multitrait-multimethod matrices showed that convergent validity tended to be higher for confidence marking techniques than for the conventional procedure. In other words, correlations between scores on the same trait measured by different methods were higher for the confidence responses than for the choice responses. The differences in correlations, however, did not attain statistical significance. No improvement in discriminant validity resulted for confidence responses over choice responses (i.e., patterns of heterotrait-monomethod and heterotrait-heteromethod correlations were no more desirable with confidence response scores than with conventional choice scores). On the basis of the above findings, it was concluded that the confidence marking techniques employed in this study did not yield improved construct validity over conventional choice testing.

-:- -:- -:- -:-

Response Style and Multiple-Choice Objective Tests

NANCY V. KOZAK and STANLEY S. JACOBS,
University of Pittsburgh

A. Purpose

The present study investigated the problem of *Ss'* bias for certain options of the multiple-choice format.

Gustav (1963), Eells (1951), and others have demonstrated that, with conventional tests and procedures, a bias does exist; apparently when S's are confronted by "ambiguous" (i.e., difficult) items, there is a tendency to select initial options (A and B in an A-D or A-E format). On the other hand, Cronbach (1946; 1950), Rapaport and Berg (1955), Marcus (1963), and Wevrick (1955), have concluded that multiple-choice tests are relatively free from response bias. The present study was undertaken to experimentally examine response bias on an objective test administered in a novel manner.

B. Methodology

S's in the present study were 49 graduate students enrolled in the introductory educational research course at the University of Pittsburgh. S's completed the *Quick Word Test,* (Borgatta and Corsini, 1964) and were divided at the median score into high and low ability groups. Due to ties, twenty-six S's were in the high ability group; twenty-three were in the low ability group.

One month later, S's completed a course examination on measurement concepts. The test was composed of 45 items, with 15 items each of easy, moderate, and extreme difficulty; the item difficulties were determined by an analysis of tests administered the previous year to an independent but similar group. Items were randomly ordered, as was the position of the correct option within items. A word count was used to distinguish "short" from "lengthy" items. The resulting 18 lengthy and 27 short items were presented to the class via 2" x 2" slides, lengthy slides being white on black, short slides being black on white. The exposure times were 30 and 20 seconds, respectively.

C. Results

A series of Chi-square goodness of fit tests hypothesizing a rectangular distribution of incorrect responses was carried out. For the total group of S's employed in the study, there appeared a significant tendency for incorrect responses to be placed in the D option position, lending support to a serial learning interpretation of the observed response style, i.e., S's appeared to be attempting to "memorize" items and options.

However, an analysis of the answer key revealed a somewhat disproportionate usage of the B option for placement of the correct answer on the 15 easy items. Although the Chi-square for this disproportionality

was non-significant, goodness of fit tests by item difficulty level and ability level were employed. Data indicate that the serial learning hypothesis is most tenable for the low ability S's on the most difficult items, while there is some suggestion that high ability S's may be "conditioned" (e.g., detect cues in option placement) by disproportionate use of a particular option. Although the chi-square was *non-significant,* there appeared a tendency for high ability S's to select the B option on the moderately difficult items.

REFERENCES

Borgatta, E. F. and Corsini, R. J. *Quick Word Test.* New York: Harcourt, Brace and World, 1964.

Cronbach, L. J. Response sets and test validity. *Educational and Psychological Measurement, 6,* 1946, 475-49.

Cronbach, L. J. Further evidence on response sets and test design. *Educational and Psychological Measurement, 10,* 1950, 3-31.

Eells, K., et. al. *Intelligence and Cultural Differences.* Chicago: University of Chicago Press, 1951.

Gustav, A. Response sets in objective achievement tests. *Journal of Psychology, 56,* 1963, 421-427.

Marcus, A. The effect of correct response location on the difficulty level of multiple-choice questions. *Journal of Applied Psychology, 43,* 1963, 48-51.

Rapaport, G. M. and Berg, I. A. Response sets in a multiple-choice test. *Educational and Psychological Measurement, 15,* 1955, 58-62.

Wevrick, L. Response set in a multiple-choice test. *Educational and Psychological Measurement, 22,* 1962, 533-538.

-:- -:- -:- -:-

The Stability of Item Indices Under Alternative Scoring Procedures

STANLEY S. JACOBS, University of Pittsburgh

A. Introduction:

A number of alternative scoring procedures have been suggested for objective tests in recent years, such as confidence weighting (Ebel, 1965a), option elimination, often referred to as Coombs-type directions (CTD), (Coombs, 1953), and probabilistic testing (Rippey, 1968). The usual justification offered for these more involved test administrative and scoring procedures is that they aid in the assessment of partial knowledge, and result in an apparent increase in estimated reliability and validity. These advantages have recently come under closer scrutiny,

however, and the evidence is not completely favorable (Jacobs, 1970; Hopkins, Hakstian and Hopkins, 1970; Hritz and Jacobs, 1970; Stanley and Wang, 1970).

The purpose of the present study was a comparison of the effects of an alternative scoring procedure (CTD) and a conventional scoring procedure on the reliability of item analysis data. Although Guilford (1954) presents data indicating difficulty indices are more reliable than discrimination indices for conventionally administered and scored tests, there is apparently no published data concerning the effects of alternative scoring procedures on decisions made concerning test items.

B. Methodology:

a) *Sample*:

Two samples of S's each totaling 86, were selected from the enrollment of the introductory educational research course at the University of Pittsburgh. Participation in research was a part of course requirements. The initial sample, comprising two intact classes, was involved during Winter term, 1969; the second sample was comprised of three intact classes during the Spring term, about four months later. Data external to the present study indicated these groups were similar in a number of respects, such as mean level of ability, proportion of males and females, mean course grades, etc.

b) *Procedure*:

S's completed the Quick Word Test (QWT) (Borgatta and Corsini, 1964) using CTD*, with black electrographic pencils. The pencils were then collected, red pencils were distributed, and S's were instructed to select the single correct response for all items, i.e., respond in a "conventional" manner.

The estimated reliabilities for the two forms of the two test administrations were calculated using Cronbach's alpha and KR_{20}. Johnson's "D" index and a difficulty index described by Ebel (1965b, p. 347) were calculated for all items ($K = 100$) for the "conventional" administration. Analogs were developed for CTD, since this procedure results in a range of item scores [$-(n-1)$ to $+(n-1)$] rather than the conventional 1-0 for pass/fail. In all cases, a median split of *Ss* was employed.

Pearson product moment coefficients were employed to determine the stability of difficulty and discriminations indices over time, with independent samples and two alternative scoring procedures. Z tests for differences between independent coefficients were calculated. Scatter plots, as well as correlation coefficients were employed to show the relationship of the two types of difficulty and discrimination indices.

* The task was to identify from 1 to n-1 of the incorrect distracters for each item. Each correct identification resulted in one point credit; a misidentification resulted in a penalty of n-1 points, where n was the number of options.

C. Results:

Analysis showed the differences between the reliability estimates for the difficulty and discrimination indices to be non-significant. The relationship between conventional and analog indices was found to be linear, although higher for difficulty than discrimination indices. (See Table 1.)

Table 1

RELIABILITIES AND INTERCORRELATIONS OF DIFFICULTY AND DISCRIMINATION INDICES UNDER CONVENTIONAL AND CTD PROCEDURES

Index	Reliability estimate Conventional	CTD	Intercorrelation
Difficulty	.94	.95	.97
Discrimination	.60	.57	.71

The latter correlation was probably depressed by the instability of the discrimination indices, which was probably, in turn, a function of the median split of S's employed.

Although the present study showed no difference in the stability of item analysis data obtained under alternative scoring procedures, the initially high KR_{20} and a reliabilities of the conventional and CTD data may have attenuated differences.

REFERENCES

Borgatta, E. F. and Corsini, R. J. *Quick Word Test.* New York: Harcourt, Brace and World, 1964.

Coombs, C. H. On the use of objective examinations. *Educational and Psychological Measurement,* 1953, *13,* 308-310.

Ebel, R. L. *Measuring Educational Achievement.* Englewood Cliffs: Prentice-Hall, 1965b.

Ebel, R. L. Confidence weighting and test reliability. *Journal of Educational Measurement,* 1965a, *2,* 49-57.

Guilford, J. P. *Psychometric Methods.* New York: McGraw-Hill, 1954.

Hritz, R. P. and Jacobs, S. S. Risk taking and the assessment of partial knowledge. Paper presented at the annual meeting of the American Psychological Association, Miami Beach, 1970 (multilith).

Hopkins, K. D., Hakstian, A. R. and Hopkins, B. R. Validity and reliability consequences of confidence weighting. Paper presented at the annual meeting of the American Educational Research Association, Minneapolis, 1970 (multilith).

Jacobs, S. S. Correlates of unwarranted confidence in responses to objective test items. *Journal of Educational Measurement,* (in press).

Rippey, R. Probabilistic testing. *Journal of Educational Measurement,* 1968, *5,* 211-215.

Stanley, J. C. and Wang, M. D. Weighting test items and test-item options, an overview of the analytical and empirical literature. *Educational and Psycological Measurement,* 1970, *30,* 21-35.

TUESDAY, NOVEMBER 17 **T.V. ROOM**

11:20 to 12:30 P.M.

REPORTING SESSION 10
GUIDANCE AND COUNSELING

CHAIRMAN:
T. F. Renick, St. Lawrence University

PAPERS:

An Empirical Investigation of Scale Modifications on Super's Work Values Inventory

ROBERT K. GABLE, University of Connecticut

A. Problem/Purpose:

The purpose of this study was to investigate empirically the effect of scale modifications on the factorial dimensions and reliability of Super's Work Values Inventory (WVI). The WVI is a 45 item instrument which purportedly measures 15 desired satisfactions students hope to find in a future vocation. Previous analysis of internal consistency reliability data indicated that some of the 3 item scales were not highly reliable in their present form.

B. Methodology:

The WVI was modified by the addition of 32 new items. The scales selected for modification and the number of items added per scale were determined from previous analysis of the WVI using alpha internal consistency reliabilities and the Spearman-Brown prophecy formula.

The revised WVI (RWVI) was administered to 611 tenth grade students in two suburban and one rural high schools. In the rural school and one of the suburban schools the total sophomore class was tested during regular class periods. In the other suburban school five study halls were randomly selected and voluntary participation was sought for a guidance survey. Following this, Guttman's multiple group rank-reduction procedure was used to extract 15 hypothesized components from the 77 by 77 item intercorrelation matrix to determine if the 32 additional items were best predicted by their hypothesized components. An image "factor" analysis was also performed on both the original WVI 45 item intercorrelation matrix and the RWVI 77 item intercorrelation to examine the factorial dimensions of the two forms. Finally, the effect of the scale modifications on scale internal consistency reliability was investigated.

C. Results/Conclusions:

Results of the analyses indicated that the additional items on the RWVI were best predicted by their hypothesized components. Also the addition of items had not significantly affected the factorial dimensions of the two versions, but had generally increased the alpha scale internal consistency reliabilities.

-:- -:- -:- -:-

The Effects of Counseling on Attitudes and Grades with Intermediate Grade Pupils Designated as Having Poor Attitudes

JOSEPH W. HALLIWELL, St. John's University
DONALD F. MUSELLA, Ontario Institute for Studies in Education, and
PHILIP J. SILVINO, SUC at Cortland

The purpose of this study was to assess the effectiveness of elementary counseling in fostering attitude change and accomplishment on the part of intermediate grade pupils who had been designated as having poor attitudes. More specifically, the study represented an attempt to compare attitude change, as measured by the S.R.A. Junior Inventory and accomplishment (as measured by improvement of report card grades), of a group of Intermediate grade children who had been counseled individually by a school guidance counselor trained to work with elementary school children with a control group of intermediate grade children who had not received such counseling. Both the students in the experimental and control groups had been identified, on the basis of scores on the S.R.A. Junior Inventory, as having poor attitudes toward the school, the home, self, others, or things in general. It was hypothesized that the counseled group would demonstrate greater gain in a positive direction on the S.R.A. Junior Inventory and in report card grades.

The S.R.A. Junior Inventory was administered to all of the Intermediate grade students in an elementary school in Central New York State. This procedure was repeated with students who entered fourth grade in each of the following two years. The students who were screened as being High (Poor) in attitude were then separated into matched pairs with one student in each matched pair randomly assigned to the experimental group and one to the control group. The counseling program (treatment) consisted of eight weekly sessions of individualized counseling for each student in the experimental group. Each year pre and post treatment scores from the Junior Inventory and grade point averages of the matched pairs of counseled and uncounseled students were compared and analyzed by means of the Wilcoxon Matched Pairs Signed Ranks Tests.

Analysis of the data indicated that (1) there were no significant differences between the counseled boys and their matched pairs in the control group on any sections of the Junior Inventory, whereas the counseled girls reported significantly fewer problems on all five sections of the Junior Inventory than did their matched pairs in the control group, and (2) there were no significant differences between the counseled students of both sexes and their matched pairs in the control groups in grade point averages either immediately after the counseling period or eight weeks later.

-:- -:- -:- -:-

Adolescent Educational Expectations: The Counselor and the Teacher — Significant or Insignificant Others?

RICHARD A. REHBERG and REVA WEISKOPF, SUNY at Binghamton

Adolescent educational expectations (realistic rather than idealistic post-high school educational goals) have been shown in previous literature to be dependent upon family socioeconomic status (SES), measured intelligence (IQ), and parental educational encouragement (PEE). The question addressed in this paper is the degree to which expectations are dependent upon the educational advice and encouragement the adolescent receives from his high school guidance counselors and teachers over and above the combined influences of SES, IQ, PEE, and the adolescent's level of expectation prior to any advice and encouragement from the counselor or teacher.

Data for the inquiry are from 1171 male and 1105 female[1] respondents surveyed in both their freshman and sophomore years in seven urban and suburban, public and parochial secondary school systems in the southern tier of New York State. Measured during the freshman survey were SES, IQ, PEE and level of educational expectation. Measured during the sophomore year were self-reported advice and encouragement from the counselor and teacher, and level of educational expectation. Statistical procedures for data analysis are Pearsonian correlation and path analysis for linear, recursive, additive models.

Educational expectations - sophomore year, are correlated moderately with counselor and teacher advice (.43 and .40, respectively) as well as with expectations - freshman year, (.72), PEE (.29), IQ (.20), and SES (.32). Of significant import, counselor and teacher advice - sophomore year, are correlated with respondent's expectation - freshman year, (.36 and .39, respectively), with PEE (.19 and .24), with IQ (.14 and .16) and with SES (.16 and .16). Given the association of expectations - sophomore year, with counselor and teacher advice, with expectations - freshman year, and with its antecedents of PEE, IQ, and SES, and given the association of counselor and teacher advice with expectations - freshman year and its antecedents, the task becomes one of assessing the degree to which the sophomore expectations of an adolescent are influenced by the advice he received from his counselors and teachers during that year when the combined influences on his sophomore expectations of his freshman expectations, PEE, IQ, and SES are removed statistically.

A path analytic approach to these data indicates that while the strongest direct determinant of sophomore expectations is freshman expectations (path coefficient ";" of .59)[2], the second strongest direct de-

---

1 Data for the females are reported in the text of the paper but omitted from the abstract to conserve space.

2 A path coefficient, in its simplest form, indicates the proportion of a standard deviation unit the dependent variable changes when the independent variable is changed by one full standard deviation unit, the effects of all preceeding independent variables statistically removed.

terminant is counselor advice ($p = .15$), followed by SES ($p = 10$), teacher advice ($p = .08$), and measured intelligence ($p = .02$). PEE virtually disappears as a direct determinant of sophomore expectations ($p = .02$) suggesting that most of the parental encouragement effect on sophomore expectations is indirect via its influence on freshman expectations, counselor and teacher advice.

In summary, the data lend themselves to the interpretation that the high school guidance counselor does exert a definite positive direct effect on the educational goal of students during their sophomore year over and above the direct effects exerted on those goals by the expectations of the respondent during his freshman year, the encouragement he received for continued education from his parents, his intelligence, and his family socioeconomic status. In light of recent criticisms of the counseling profession, such a finding is not without meaningful implications.

-:- -:- -:- -:-

Correlates and Dimensions of Student Alienation from the High School

JUDIE SINCLAIR and RICHARD A. REHBERG, SUNY at Binghamton

This paper measures some of the probable causes and consequences of the growing estrangement between the nation's youth and its schools. Using a sample of approximately 1200 male high school sophomores, a factor analysis of the data revealed three factors of alienation from the high school: *powerlessness* or the low expectation that one's own efforts can attain the rewards or goals that one seeks, *estrangement* or the feeling of dislike for a particular school and its administrators, and *meaninglessness* or the feeling that the content of the school is irrelevant to the problems of the world.

These three dimensions of alienation were found to be significantly and negatively linked to the level of education the student aspires to attain if there were no constraints upon his mobility resources and the level of education the student expects to attain given the constraints (e.g., financial or intellectual) which operate upon him. However, alienation was not significantly related to either the socioeconomic or the measured intelligence level of the student. In addition, alienation is significantly associated with indicators of nonconformity in the school, such indicators as the frequency with which the student skips school, the amount of time he spends on homework and his reputation for behavior with his teacher.

Path analysis reveals that both educational aspirations and expectations have a direct influence on alienation and nonconformity, while alienation has a direct influence on nonconformity. It also reveals that the influence of socioeconomic status and measured intelligence upon alienation and nonconformity is mediated through the student's educational aspiration and expectation levels.

The data thus permit the inference that if either the educational aspiration or expectation levels of the students in the high school change, there will be a corresponding change in the amount of alienation and nonconformity in the high school. This, we suggest is what is happening, that the goal of college is being reevaluated by some students, and this re-evaluation has led to a corresponding change in the level of alienation in the high school.

— SYMPOSIA —

TITLE OF SYMPOSIUM:

Individualization: A Cooperative Venture between the University and the School

CHAIRMAN:

DEAN JONATHAN MESSERLI
School of Education
Hofstra University

OTHER PARTICIPANTS:

MRS. MURIEL GERHARD
"A Model Program"
Norwalk Public School District
Connecticut

DR. CHARLES DANOWSKI
Chappaqua, New York Public Schools

DR. ESTELLE GELLMAN
Department of Educational Psychology
Hofstra University

MR. WERNER STUTZEL
Bureau of Educational Evaluation
Hofstra University

DR. ESIN KAYA
Department of Educational Psychology
Hofstra University

MR. PIERRE WOOG
Bureau of Educational Evaluation
Hofstra University

The cooperation of the Bureau of Educational Evaluation of Hofstra University with three school districts in developing an observation scale for determining the extent to which teachers individualize instruction is described. The success of these cooperative efforts is cited as an indication that university enterprises such as the Bureau of Educational Evaluation can provide a vehicle whereby the university can work cooperatively with the public schools, and can provide the type of professional evaluative services needed for project evaluation.

The direction that the School of Education at Hofstra hopes to take relative to school-related research is explained briefly.

A co-director describes "A Model Program" and its objectives. The purpose of the program is to work with teachers on individualizing instruction and thereby to increase the degree of individualized instruction in the Norwalk, Branford and North Haven Public schools. Individualization was operationally defined in terms of the characteristics identified by Dr. Charles Danowski in his book *Teachers Who Individualize Instruction.*

Dr. Danowski discusses the theoretical development of the characteristics which he has identified as indicative of individualization. He developed these characteristics while working at the Institute of Administrative Research at Teachers College, Columbia University.

The development of an I-scale for measuring individualization, based on Dr. Danowski's characteristics of individualizing teachers, is described. Each observable characteristic was operationalized and a recording form was developed. Validation procedures are discussed.

Limitations of the I-scale, problems involved in the observation of individualization and the use of the I-scale in observation of the teachers in the program are described by an observer for the evaluation of "A Model Program."

The summary includes discussions among panel participants and with the audience.

-:- -:- -:- -:-

TITLE OF SYMPOSIUM:

A Developmental Model for Broad-Based Involvement in Instituting Educational Innovation: Environmental Studies

CHAIRMAN:

WALTER GOODMAN
Board of Cooperative Educational Services
Westchester and Putnam Counties, New York

OTHER PARTICIPANTS:

JOHN DRIER
Lakeland Public Schools

EDWIN WOOD
Board of Cooperative Educational Services
Westchester and Putnam Counties, New York

MISS CAROL SCHNEBEL
Westchester Regional Educational Council

TED GRENDA
Environmental Education Task Force
New York State Education Department

The cooperative development of a design for a comprehensive approach to environmental literacy in elementary and secondary schools is proposed.

The nature of the two crises, environmental and educational, is described and the urgency of the crises is emphasized. The recentness of the general public awareness of approaching environmental disaster is noted.

Students, teachers, private industry and all other available sources of input are considered. A total cooperative effort is judged to be necessary.

The proposed program is divided into three parts: Environmental Education Clearinghouse, Student Environmental Monitoring and Regional Environmental Studies Program. Funding guidelines are given based on these divisions.

Directions in which the educational effort might proceed in the long term are proposed. Local, regional and world points of view are suggested. A blue-print for future design and a flowchart for a path toward maximizing environmental literacy are set forth.

-:- -:- -:- -:-

TITLE OF SYMPOSIUM:

National Assessment — Some Data, At Last!

CHAIRMAN:

THOMAS R. KNAPP
University of Rochester

OTHER PARTICIPANTS:

RALPH W. TYLER
Center for Advanced Study in the Behavioral Sciences

LARRY CONAWAY, NAEP

JAMES G. ANDERSON
Purdue University

Some of the results of the initial assessment in citizenship, science and writing are revealed. The concentration is on data obtained during the 1969-1970 assessment year.

History and future plans for the project are explained. Comments are made on the background for the data (cooperation in the schools and the homes, training of the "assessors," reactions of the "assessees," etc.) Along with a presentation of the actual data, a copy of a summary of the principal findings is provided to the audience.

A behavioral scientist not directly associated with the project (Dr. Anderson) gives his reactions.

-:- -:- -:- -:-

TITLE OF SYMPOSIUM:

The Impact of Collective Negotiations on Educational Organizations

CHAIRMAN:

Dr. James A. Belasco
Department of Organization
State University of New York at Buffalo

OTHER PARTICIPANTS:

Dr. John Drotning
State University of New York at Buffalo

Dr. Robert Starr
Frontier Central School District

Mr. Fred Greene
Departments of Organization and Educational Administration
State University of New York at Buffalo

Mr. Alan Glassman
Departments of Educational Administration and Organization
State University of New York at Buffalo

Dr. M. Friot
North Tonawanda Public Schools

Dr. Joseph Alutto
State University of New York at Buffalo

In the Northeast the years 1969 and 1970 have been called the "Years of the impasse." With the adoption of collective bargaining by more than 80% of the school districts in this region, and the rise in teacher militancy, there has been an increasing utilization of the legislatively imposed impasse dispute settlement procedures (for example, more than 50% of the school districts in New York State utilized the Taylor Law impasse procedures during 1970). Some of the effects which collective negotiations and such third party interventions as mediation and fact-finding have had on educational institutions are explored from various research perspectives.

Specifically, empirical data collected during the past several years concerning the economic, organizational and operational consequences

of collective negotiations and such third party interventions as mediation and fact-finding is reported. Data analyzed is in the areas of (1) economic consequences, such as tax rate changes, per pupil expenditures and shifting intra-budgetary allocations; (2) organizational consequences such as shifting the locus of decision making and changes in the administrative structure; (3) such operational consequences as the changing role of the school superintendent and the changing relationship between the building principal and his faculty.

Longitudinal budgetary data from a sample of New York State School Districts who have had varying collective negotiations and third party experiences have been collected. Over 200 pieces of financial and budgetary information (such as tax rates, intrabudgetary allocations, WADA expenditures per assessed dollar) are included. Utilizing multivariate and discriminant analysis, these data have been related to a wide range of collective negotiations and third party intervention activities. The analysis identified those district economic and budgetary characteristics that were associated with various dimensions of collective negotiations and the effectiveness of various third party interventions.

The operational consequences of collective negotiations by administrative personnel (e.g., principals and assistant superintendents) is reported. The data is based on a survey of 108 districts in Western New York and an in-depth case study of eight such districts. Significant changes in personal relations among teachers, administrators, chief school officers, and school board members and changes in the role of the chief school officer as two of the significant consequences of administrator negotiations are noted.

The relationships between the criteria employed by various third party interventors, the situational variables associated with the employment of specific criteria, and their organizational and economic consequences are expounded. In-depth interview data was drawn from 28 school districts in Western New York. Analyses includes both longitudinal and latitudinal tabular comparisons.

Research on the effects of collective negotiations on the working relationship between the principal and his faculty is described. Using the teacher association representative in a large urban school district as the focal position, data have been collected concerning role and goal conflicts and alternate methods of resolution. Utilizing multivariate discriminant and path analyses, these conflicts have been related to the utilization of various collective negotiation techniques.

An analysis is made of the impact which collective negotiations and third party interventions have had on the role of the chief school officer. It includes not only the schizophrenic role of the chief school officer during collective negotiations, but details how that role changes once a third party arrives on the scene (as for example, a mediator or a fact-finder) and how that role shifts again once the contract has been signed.

-:- -:- -:- -:-

TITLE OF SYMPOSIUM:

Application of the Rasch Model to Test Development

CHAIRMAN:
HAROLD F. BLIGH
Harcourt Brace Jovanovich, Inc.

OTHER PARTICIPANTS:
DR. S. DAVID FARR
SUNY at Buffalo

DR. JOANNE M. LENKE
Harcourt Brace Jovanovich, Inc.

DR. JERRY DUROVIC
Department of Civil Service, State of New York

The Rasch Model is described briefly and the stage is set for the practical applications of the model. Use of the model in developing achievement tests is discussed. An analysis of a test developed by the New York State Civil Service Department for use with supervisors is presented and the application of the Rasch Model to attitude measurement is explored.

-:- -:- -:- -:-

TITLE OF SYMPOSIUM:

Large Scale Evaluation Projects: Problems and Procedures

CHAIRMAN:
THEODORE ABRAMSON
Division of Teacher Education
City University of New York
Office of Institutional Research and Evaluation

OTHER PARTICIPANTS:
MAX WEINER
City University of New York
Division of Teacher Education
Office of Institutional Research and Evaluation

PATRICIA KAY
City University of New York
Division of Teacher Education
Office of Institutional Research and Evaluation

SAMUEL D. MCCLELLAND
Bureau of Educational Research
Board of Education of the City of New York

RICHARD C. COX
Office of Measurement and Evaluation
University of Pittsburgh

Some of the problems inherent in conducting scale evaluations and some of the procedures that may be followed in meeting the contingencies that typically arise during the course of conducting the evaluation are presented. The problem is approached from a number of different vantage points. (1) That of an evaluator operating to fulfill a contract to evaluate a specific program. The overall political problems and the problems involved in large scale testing as well as general models for overcoming these difficulties encountered is developed. (2) That of an evaluator operating as a consultant to an ongoing project and the problems and procedures involved in specification of objectives and design of the overall evaluation especially when dealing with project people who lack substantive knowledge of research ideas and methods. (3) That of an evaluator working within a large school based research and evaluation unit which is evaluating programs being conducted by other departments within the same school system while at the same time operating as a contractor to external agencies.

The difficulties researchers may expect to encounter in studying schools in urban centers are discussed. Emphasis is placed on such problems as evaluation design, selection of schools, pupils, tests and questionnaire administration. In addition, the external influences of administrator and community are included.

Examples of the methods of generating and/or obtaining specified objective and priorities from the literature are cited and some practical aspects and resulting problems associated with using these methods are dealt with. Some implication of not having previously specified objectives for the evaluators and the course of the evaluation as well as a discussion of possible reasons for the difficulties of obtaining objectives are presented. Suggestions for the future are included.

Some current testing procedures and their concomitant sampling problems are described. Possibilities for research related to test variables as part of the testing phase of the evaluation are discussed. Performance contracting is related to the testing model described earlier.

The summary focuses on the following three areas:

1. Evaluating programs conducted by other school departments
2. Supervising research performed by agencies under contract
3. Systems approach to evaluation management.

-:- -:- -:- -:-

TITLE OF SYMPOSIUM:

Collective Negotiations — Analytic Perspectives

CHAIRMAN:

R. OLIVER GIBSON
SUNY at Buffalo

OTHER PARTICIPANTS:

A. WILLIAM VANTINE
Mt. Lebanon Central School District

GEORGE F. ROBERTS
Edinboro State College

CHARLES F. ADAMS
Western New York School Development Council

SEYMOUR EVANS
New York University

Literature on collective negotiations in school systems is relatively recent and has tended to be, primarily, either descriptive or prescriptive. It is time to make more rapid progress on testing hypotheses related to analytical frameworks. The potential usefulness of three conceptualizations as approaches to making sense of collective negotiations are explored.

A formulation involving concepts of pure, mixed, and mutual accommodation bargaining is proposed. It contains the changing utility model for pure bargaining issues. The bargaining range model is used to spot dispositions on selected bargaining items during the course of negotiations. Data are derived from tape-recorded observation of "conflictual" negotiations in a school district in the metropolitan Buffalo area.

Views of chief school officers' roles in formalized collective negotiations in relation to their perception of board and staff role expectations are analyzed, based upon a conceptualization that uses concepts of legitimacy, collective sanctions and value orientation of the position incumbent.

In the last case, the concepts of alienation from work and alienation from fellow workers as it relates to the negotiating process are brought into focus. Based upon previous research studies indicating a relationship between teacher alienation and the nature of school system organization and its leadership, a case for further research into the potential of collective negotiations for effecting alienation is proposed. The derivation of hypotheses is logically developed from the theories of bureaucratic organizations and leadership behavior. The collective negotiations process is viewed as having either a reinforcing influence on the school system's bureaucratic structure and thus increasing teacher alienation or the procedure whereby new system structures can be devised that may reduce teacher alienation.

-:- -:- -:- -:-

TITLE OF SYMPOSIUM:

A Data Bank for Curriculum Development: How Feasible, How Useful?

CHAIRMAN:

JOEL WEISS
Ontario Institute for Studies in Education

OTHER PARTICIPANTS:

ELLEN REGAN
Ontario Institute for Studies in Education

MICHAEL CONNELLY
Ontario Institute for Studies in Education

JACK EDWARDS
Ontario Institute for Studies in Education

The development of a data bank of questions pertaining to the curriculum development process is considered. The questions in the bank would reflect many of the concerns facing curriculum developers in their choice of procedures.

A discussion of pertinent issues related to the process of curriculum development serves to introduce specific questions related to topics such as assumptions, goal setting, materials development, and evaluation.

Proposed questions are considered from three perspectives: (1) the value and utility of proposed questions from a developer's point of view, i.e., a person engaged in developing a curriculum program, (2) the usefulness of developing generalization about curriculum from a researcher's perspective, (3) the importance of knowing what to look for from the evaluator's position.

Audience reaction to both the "idea" and suggested "content" of the data bank is solicited, as well as opinions on the feasibility of collecting data about specific curriculum projects for inclusion in the data bank.

-:- -:- -:- -:-

TITLE OF SYMPOSIUM:

A Comparative Study of Achievement and Related School Factors in Large Urban Centers

CHAIRMAN:

DIETER H. PAULUS
Bureau of Educational Research
School of Education
University of Connecticut

OTHER PARTICIPANTS:

WALLACE R. ROBY
Connecticut State Department of Education

RICHARD A. GUSTAFSON
Santa Clara County Supplementary Education Center

CHAUNCY N. RUCKER
University of Connecticut

DONALD L. BEGGS
Southern Illinois University

JOSEPH S. RENZULLI
University of Connecticut

The symposium focuses on a major study recently completed by the University of Connecticut in cooperation with the Connecticut State Department of Education. Data on achievement and related school variables were collected for the 1965-66 and 1968-69 years from all schools in the largest cities in Connecticut. A total of 19,641 fourth grade students from 154 school made up the population.

The analysis compared achievement in Title I funded schools to that in Non-Title I schools. Such school variables as minority group concentration, mobility, per-cent attendance, school enrollment, per pupil expenditure, and teacher turnover were compared with student achievement.

The following conclusions were reached:

1. Reading achievement in the schools with high concentrations of children from low-income families is approximately one year below grade level.

2. Reading achievement in large urban centers is lower today than during the 1965-66 school year.

3. Schools having the highest concentrations of children from low-income families and minority groups reflect the lowest levels of reading achievement.

4. The factor most positively related to achievement in schools with a high concentration of children from low-income families is attendance.

5. Achievement in Title I schools decreased by the same amount as in the Non-Title I schools over the period of this study.

The procedures and some of the problems involved in conducting this state-wide study are discussed. The study design is explained in detail and the unique approaches utilized in the analysis and presentation of the data are described. The results of the study and some of the implications for educational programming in urban centers are expounded.

-:- -:- -:- -:-

TITLE OF SYMPOSIUM:

Visual Literacy's Place in the Language Development of Children

CHAIRMAN:

Dr. Robert Craig Whitsitt
Lakeside School, District No. 14
Spring Valley, New York
Supervising Principal

OTHER PARTICIPANTS:

Mr. Jack Debbs
Eastman Kodak
Rochester, New York

Mr. Samuel B. Ross
Green Chimneys School
Brewster, New York

Basic research projects with regard to visual literacy now underway in the Green Chimneys School, Brewster, New York and the Lakeside School, Spring Valley, New York, as well as nationally, are described.

The objectives, procedures, and results of three years of active development of teaching processes, using visual literacy with creative, emotionally disturbed children at the Green Chimneys School, are set forth. The emphasis is on the Creative possibilities for the superior child in better expressing himself through poetry, narrative and art work.

The various programs being carried out to improve the teaching of language skills in different parts of the country, under the umbrella of the Conference for Visual Literacy, are related to one another. The philosophy of visual literacy and its national objectives are expounded.

Three years of research and work with disadvantaged children at the Lakeside School is reported. Implications for the improvement of language instruction derived from the research are related to a Title I project on tutoring the disadvantaged child.

Examples of visual literacy are given: a syntactical approach; a mode for sequencing ideas into creative stories; a problem-solving device using the camera as a data collecting system; and the application of visual literacy techniques for helping to solve the learning disabilities of the disadvantaged child.

TITLE OF SYMPOSIUM:

Objectives and Procedures for Preparation of Educational Research Personnel

CHAIRMAN:

RONALD HRITZ
Department of Educational Research
University of Pittsburgh

OTHER PARTICIPANTS:

DR. JOHN EGERMEIER
Research Training Branch
United States Office of Education

DR. JOHN H. ROSENBACH
Department of Educational Psychology
State University of New York at Albany

JAMES BECKER
Research for Better Schools
Philadelphia, Pennsylvania

KENNETH WISSMAN
Department of Educational Research
University of Pittsburgh

DR. JASON MILLMAN
Cornell University

A broad representation of the various views and concerns of the educational research community associated with the preparation of educational research personnel is presented.

Some of the topics for discussion are:

1. manpower needs
2. academic level (s) of preparation
3. description of the terminal behaviors desired
4. changes in curriculum
5. location of preparation
6. direction of Federal funding
7. employment responsibilities

-:- -:- -:- -:-

TITLE OF SYMPOSIUM:

AUTOMATED EDUCATION - The application of behavioral science, engineering and modern technology to the educative process (including computer assisted instruction and computer managed instruction).

CHAIRMAN:

DR. SAMUEL D. MCCLELLAND
Bureau of Educational Research
Board of Education of the City of New York

OTHER PARTICIPANTS:

DR. GEORGE FORLANO
Board of Education of the City of New York

PROF. ALICE PADAWER-SINGER
Columbia University, Long Island University

PROF. MELVIN FERENTZ
City University of New York

PROF. GILBERT R. HOROWITZ
New York University

PROF. HAROLD MITZEL
The Pennsylvania State University

PROF. MAX WEINER
City University of New York

Discussion of the subject topic is lead off with a consideration of the human factor in a systems management approach to the educative process. Emphasized are the applications of scientific sensitivity training and information feedback through the use of video tape.

The engineering and electronic data processing aspects of automated education in the twenty-first century are forecast and a 1968-1969 Computer Assisted Instruction Project in Elementary Arithmetic in New York City is described and related to theoretical research issues.

Findings from research on Computer Assisted Instruction and Computer Managed Instruction at Pennsylvania State University are reported. Philadelphia and Pittsburgh public school systems are linked by cable to the university computer at University Park, Pennsylvania.

The Dial-A-Drill Program in New York City is described. The system for in-home drill-practice for pupils who have completed their school day utilizes touch-tone telephone receivers as both the instructional receiver via audio and the response transmitter via the touch-tone frequency signal.

-:- -:- -:- -:-

INDEX OF PARTICIPANTS

The following index concerns the authors and co-authors. Reference is to page numbers.

Names	Pages
Abramson, Jacob	12
Alberti, Jean M.	42
Alutto, Joseph	47
Armstrong, Robert J.	3
Bagley, Clarence H.	18
Barnes, Valerie B.	10
Belasco, James	47
Benson, Forrest Wayne	45
Braun, John R.	56
Brinsmaid, Sarah R.	31
Byrd, Montess	9
Carter, Donald E.	28
Dacey, John	25
Dalfen, Susan M.	27
Deffenbaugh, Sue A.	27
Ehrlich, Virginia Z.	32
Fileatreau, William	1
Forlano, George	12
Formanek, Ruth	31
Fox, David J.	10
Gable, Robert K.	64
Gibson, R. Oliver	48
Goodstein, Henry A.	30
Gordon, Marjory	25
Gorth, William P.	36
Gray, William M.	2
Greenberg, Selma	31
Greene, John	40
Hall, John W.	46
Halliwell, Joseph W.	65
Hambleton, Ronald K.	36
Harckham, Laura D.	14
Hick, Thomas L.	9
Holden, Marjorie H.	7
Hritz, Ronald J.	54
Hughes, Francis P.	39
Jacobs, Stanley S.	54, 59, 60
Jennings, Robert E.	50, 51
Jensen, John A.	3
Kaye, Mildred	34
Kievit, Mary Bach	19
Kiser, Chester	49
Koehler, Roger A.	58
Kozak, Nancy V.	59
Kubiniec, Cathleen M.	42
MacGinite, Walter H.	7
McCook, William M.	4
McCowan, Richard J.	16, 31
McNally, Lawrence	5
Miller, Harris	36
Miller, James F.	1
Milstein, Mike M.	51

Mongerson, M. Duane 16
Montalbano, Joan 14
Morgenstein, Melvin 21
Murray, Kay C. 32
Musella, Donald F. 65

Olsen, Henry D. 43

Paulson, Patricia 20
Paulus, Dieter H. 4
Powers, James E. 38
Rehberg, Richard A. 66, 67
Renzulli, Joseph S. 4
Ripple, Richard E. 27
Ross, Paul C. 35
Rossi, Barbara Hummel 17

Schmitt, John A. 3
Silvino, Philip J. 65
Sinclair, Judie 67

Throop, Robert K. 1
Tinley, John J. 56

Ward, Byron J. 8
Weiskopf, Reva 66
Welty, Gordon 36
Wiles, David K. 24
Woog, Pierre 26